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**SITE ASSESSMENT REPORT
FOR
JEFFERSON PROCESSING SITE
MINGO JUNCTION, JEFFERSON COUNTY, OHIO
TDD: S05-9903-008
PAN: 9M0801SIXX
DOCUMENT CONTROL NUMBER: START-05-23-050105**

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1. Introduction

The Ecology and Environment, Inc. (E & E), Superfund Technical Assessment and Response Team (START) was tasked by the United States Environmental Protection Agency (U.S. EPA) under Technical Direction Document (TDD) number S05-9903-008 to perform a site assessment at the Jefferson Processing Site in Mingo Junction, Jefferson County, Ohio. START was tasked to review available background information, develop and implement a health and safety plan, perform a site inspection, collect samples from transformer areas, provide photograph and video documentation, provide a written log documenting all on-site activities, and evaluate the potential threats to human health and the environment. All site activities were coordinated by U.S. EPA On-Scene Coordinators (OSC) Stavros Emmanouil and Karla Auker.

2. Site Background

2.1 Site Description

The Jefferson Processing Site is located on County Road 74 (Gould Road), Mingo Junction, Jefferson County, Ohio. The geographical coordinates for the site are latitude 40°18'40"N and longitude 81°40'22"W (Figure 2-1). According to background information, the site area is comprised of 61 acres which includes several structures such as smaller buildings, cooling towers, a pump building (Pumphouse), an electrical substation, a laboratory, two larger furnace/processing buildings (Plant J-1 and Plant J-2), several settling ponds and numerous uncovered slag and baghouse dust waste-piles (Figure 2-2). According to the May 1997, *Ohio EPA - DERR/DHWM Sampling Plan for Jefferson Processing/Argo Sales, f.k.a. Satralloy/Satra Concentrates*, the entire property on which the site is located consists of approximately 320 acres, and is located 4 miles south of Steubenville, Ohio, on the flood plain of Cross Creek. The site is situated in a mixed rural and industrial area. START observed an operating manufacturing facility and an operating salvaged parts sale facility approximately 1.5 miles northeast of the site on Gould Road. The interiors of the two furnace/processing buildings have undergone extensive dismantling and a majority of the processing and furnace equipment has been removed for salvage. Plant J-1 contains 7 transformers which are located on three of the floors. Plant J-2 contains 3 transformers located on the third and fourth floors. A fourth transformer is believed to be located in an inaccessible upper-level room in the south end of Plant J-2. One transformer is also located in the Pumphouse. Three transformers are located in a fenced-in outdoor substation. The fence gate into the substation was observed to be unsecured. The east and west sides of the site are bordered by Cross Creek. Cross Creek also runs along the east side of the portion of Gould Road which borders the site property. Sheeprock Road is located along the west side of Cross Creek along the western edge of the property. Dense woods border the property to the north and west. Gould Road borders the site to the east and south of the property. Cross Creek also runs along the east side of the portion of Gould Road which borders the site property. A ridge with a top elevation of approximately 1,000 feet runs northeast to southwest through the property and

borders the southwest, west, northwest and northern sides of the site. According to a 1992 report completed by PRC Environmental Management, Inc. (PRC), the closest residence is located approximately 1,000 feet northwest of the site. Cross Creek empties into the Ohio River, approximately 2 miles east of the site. Numerous industrial plants are located along the Ohio River. The facility is currently unoccupied except for on-site security present for approximately 8 hours during the day. Access into the buildings on site differs from building to building. Open entrances at various locations around the perimeters of Plant J-1 and Plant J-2 are blocked off by large slabs of concrete or concrete-filled obstacles to prevent access by vehicles and equipment; however, pedestrian traffic through these entrances is still possible. Securable doorways are locked. Although one of the bay doors to the Pumphouse is accessible only from the inside; it is possible to enter the Pumphouse through an unlocked window on the western side of the building using a ladder. Doorways which access the rooms containing the transformers are secured in one of three ways: concrete blocks have been placed in front of the doors; the doors have been spot welded closed; or metal bars have been welded across the doorways. Approximately 159 capacitors are located in a locked room at the southern end of the first floor on the eastern side of Plant J-1. A gate blocks off vehicle access along the facility driveway. This gate is secured with a chain and keyed padlock. However, pedestrian access is possible onto the site property. An individual hired by the property owner is present on site for approximately 8 hours a day during the week to provide security.

2.2. Site History

In 1958, Vanadium Corporation of America (Vanadium) established the 36-acre ferro-alloys production facility. In the 1960s, Vanadium merged with Foote Mineral Company (Foote). Foote then sold the production facility to Satralloy Inc. (Satralloy), in the mid-1970s. Vanadium, Foote, and Satralloy used chrome ore which was shipped to the site to manufacture ferro-alloys. During the ore smelting and refining processes, large quantities of slag were generated as byproducts. Background information suggests that large quantities of slag and baghouse dust waste were generated and stockpiled without covers on the property in areas such as the top of the ridge. In most cases the stockpiles were placed on unlined surfaces. In 1982, Satralloy shut down the furnaces which halted ferro-alloy production. In the mid-1980s, Satralloy changed its name to Satra Concentrates, Inc. (Satra). At that time, usable chromium was recovered from the piles of low-carbon slag wastes on site through a water concentration process. Several violations were noted during a 1988 Polychlorinated Biphenyls (PCBs) Compliance Inspection conducted by OEPA at the facility. The findings of this inspection lead to Consent Agreement and Final

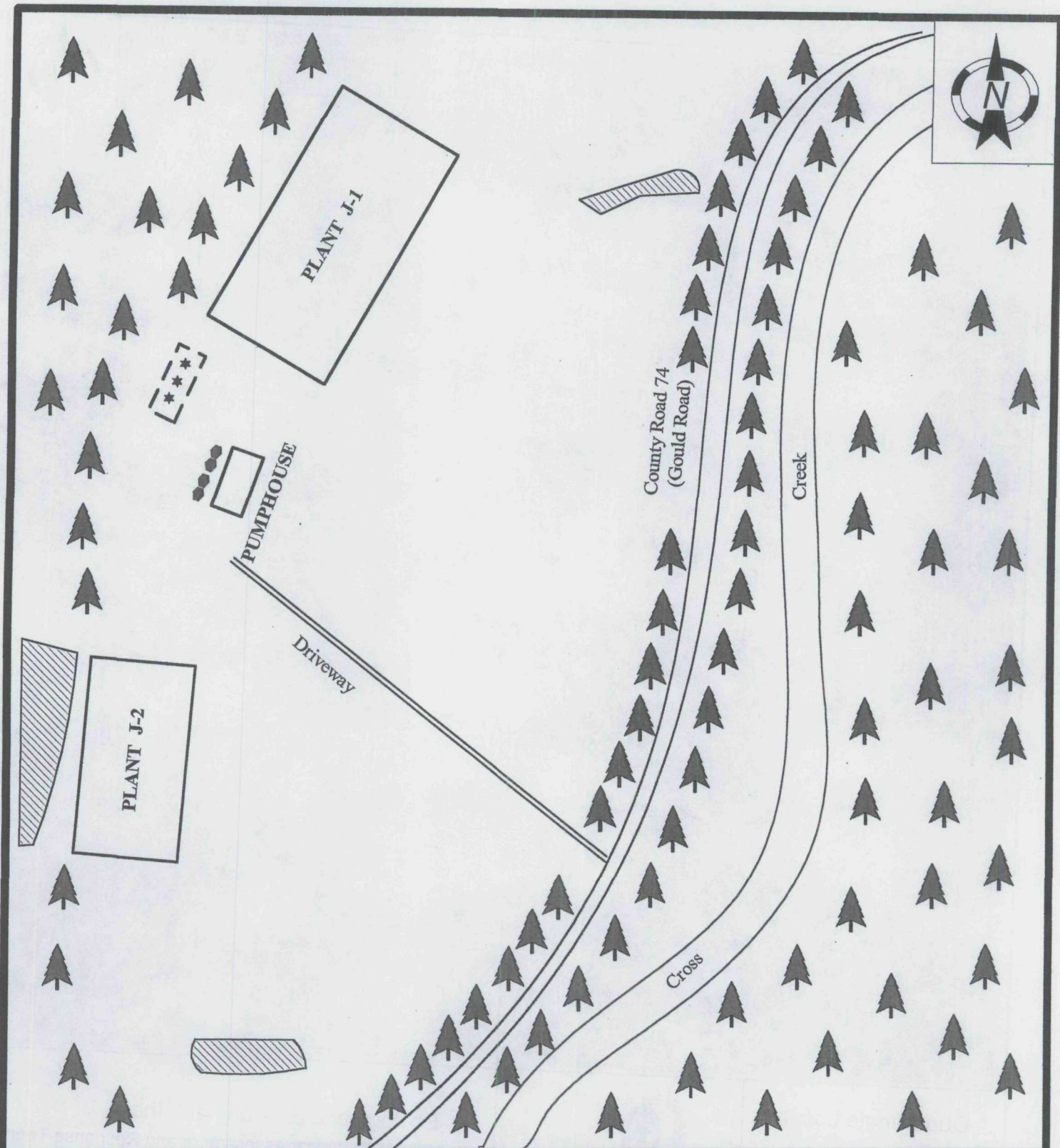
Orders which were issued to Satralloy, Inc. in 1990.

E & E completed a Site Assessment Report in December, 1991 under TDD number 05-9110-014. PRC, under contract with U.S. EPA, issued a Screening Site Inspection Report in December 1992 under Contract number 68-W8-0084 and Work Assignment number 29-5JZZ.






In June 1994, Catherine Glorious purchased the Satra facility and property at a sheriff's auction. Reportedly, Satra was then evicted from the property. Ms. Glorious began conducting business at the facility under the company name of Jefferson Processing. The slag at the facility was reclaimed for resale. Sometime after June 1994, approximately 75,000 tons of chromite ore which had been stockpiled at the facility for the General Services Administration were removed from the site. It was also reported that vandals had removed equipment and transformers from site since Ms. Glorious had purchased the property.

Since the June 1994 purchase of the property by Ms. Glorious, the facility has been operated by Mr. Gary Smith of Argo Sales Company, Inc. Operations under Mr. Smith included general maintenance and clean-up of abandoned site structures as well as crushing and screening high-carbon slag for the purpose of selling it as road aggregate.

The presence of several PCB transformers and capacitors was noted by OEPA during site visits conducted prior to the May 1997 PCB Compliance Inspection.



Legend

-  Tree Line
-  Transformers
-  Cooling Towers
-  Substation Fence
-  Bag House Dust/ Slag Waste Piles



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TITLE: Site Features Map		FIGURE: 2-2
SITE: Jefferson Processing Site		SCALE: Not to Scale
CITY: Mingo Junction	STATE: Ohio	TDD: S05-9903-008
SOURCE: Ecology and Environment		DATE: 1999

3. Site Assessment

3.1 Site Observations

On August 11, 1999, START members Anne Marie Mayer and Justin Bowerman and U.S. EPA OSC Karla Auker met the site security personnel at the Jefferson Processing Site to conduct a site assessment. The site is situated in a rural area; however, START observed a manufacturing facility and salvage yard operating within 1.5 miles of the site. Several structures are located on the site property including Plants J-1 and J-2 and a smaller Pumphouse. Prior to the arrival of START and U.S. EPA, the security personnel opened the doorways to the rooms which contained the transformers. These doors are secured in one of three ways: concrete blocks are placed in front of the doors; doors are spot welded closed; or metal bars are welded across the doorways. The open entrances into Plants J-1 and J-2 are blocked by large, heavy obstacles to prevent vehicle access; however, pedestrian traffic is still possible. Access into the Pumphouse is difficult, but possible through an unlocked window on the western side of the building. All doors and windows in the building were observed to be closed and secured. During the reconnaissance, START members Mayer and Bowerman conducted air monitoring with a photoionization detector, a combustible gas/oxygen meter, and a radiation meter. Readings on all instruments did not exceed background levels.

The security personnel directed START and U.S. EPA to a locked room at the southern end of the first floor on the eastern side of Plant J-1 where numerous General Electric capacitors had been staged. Upon entrance into the room, U.S. EPA counted 159 capacitors to be present. These capacitors were suspected to contain PCBs. There were 6 rooms throughout Plant J-1 which contained a total of 7 transformers labeled with PCB plaques. A fenced outdoor substation located southwest of Plant J-1 contained 3 transformers. Three rooms within Plant J-2 contained 3 transformers. A fourth room located on the fourth floor of the building was not accessible due to missing stairways, but is believed to also contain a transformer. The Pumphouse contained 1 transformer.

Room 1 on the first floor of Plant J-1 contained transformers C-505415 and C-503736. A 4-inch by 5-inch drip spot was observed under a valve near the bottom of the General Electric Pyranol

Transformer, serial number C-505415. According to site security personnel, the spot was from a previous sample event when the valve was opened to collect the sample. The valve currently appeared to be closed and did not appear to be leaking. Rust and corrosion was observed on parts of the General Electric Pyranol Unit Substation Transformer, serial number C-503736, particularly on the cooling pipes. A bottom pipe also appeared to be leaking onto the floor. Room 2 on the first floor of Plant J-1 contained transformer C-856081 which was observed to have badly corroded pipes. It was also observed that the room itself was damp. Room 3 on the third floor of Plant J-1 contained one known transformer. Access into the room is not possible due to large metal bars which had been welded into the door frame. A blue label was observed on the doorway which stated that the dielectric fluid in the unit was tested and subsequently defined as containing less than 50 parts per million (ppm) PCBs and was therefore classified as non-PCB. Room 4 on the third floor of Plant J-1 was also not accessible and placarded with a blue label identical to the one on the doorway into Room 3 of Plant J-1. Room 5 on the third floor of Plant J-1 contained the General Electric Pyranol Unit Substation Transformer, serial number C-503735. A floor drain was located within 5 feet of the transformer. There are two access doors into Room 5. Room 6 on the third floor of Plant J-1 contained the General Electric Transformer, serial number C-657628. This transformer was observed to have a label on its identification (ID) plate indicating that the transformer had been sampled on 3/12/86 and was found to contain 136 ppm PCB by Ohio Transformer Corporation, Louisville, Ohio. A moisture and or oil ring was observed around the bottom of the transformer and around a sealed access plate at the top of one of the sides.

Three transformers were observed in a fenced outdoor substation located on the northwest side of Plant J-1. General Electric Transformer, serial number C-657612, was marked with a caution label identifying it as PCB-contaminated electrical equipment that contained dielectric fluid consisting of 50 to 499 ppm PCBs. The cooling pipes were observed to be rusted. Gravel and soil beneath sections of cooling pipes were also observed to be discolored. General Electric Unit Substation Transformer, serial number C-656341 was marked with a label identifying it as containing PCBs. General Electric Unit Substation Transformer, serial number C-656340 was marked with a caution label identifying it as PCB-contaminated electrical equipment that contained dielectric fluid consisting of 50 to 499 ppm PCBs. A drip of liquid was observed to be suspended from a plug underneath a section of cooling pipes. One side of the transformer was also discolored, as was a section of the soil and gravel below the transformer.

Room 1 on the fourth floor of Plant J-2 contained the General Electric Pyranol Unit Substation Transformer, serial number C-856281. Oily residue was observed on the floor and base of the transformer on its eastern side. A floor drain was located within 5 feet from the oil residue and the eastern side of the

transformer. A valve on the west side of the transformer also appeared to be leaking and there was a visible oil spot on the floor below the valve. Room 2 on the fourth floor of Plant J-2 contained General Electric Transformer, serial number L-249412. The lower valve on this transformer appeared to be leaking oil onto the floor. START also observed a 1 to 2 inch layer of fine dust on the floor under the leaking valve which also had a considerable amount of oil residue in it. Room 3 on the third floor of Plant J-2 was not accessible due to the door being welded shut. The door was marked with a blue label indicating that the dielectric fluid in the unit contained less than 50 ppm PCB and was therefore classified as a non-PCB. According to the security personnel, a room is located on an upper level of Plant J-2 and believed to also contain a transformer. However, access to this room is not possible due to missing stairways to that upper level and the room is not accessible by any other level. This area will be referred to as Room 4 of Plant J-2.

The Pumphouse contains the General Electric Pyranol Unit Substation Transformer, serial number C-856282. A floor drain is located directly adjacent to the southwest corner of the transformer. Table 3-1 summarizes the locations and labeling information associated with each transformer observed during the assessment walkthrough.

3.2 Sampling Activities

At 1430 hours, START initiated sampling activities. All samples were collected in modified level D personal protective equipment. Each sample was collected with dedicated sampling equipment and placed into 8-ounce glass sample jars with Teflon lids. Wipe samples were placed in 40-ml glass vials. Sampling gloves were changed prior to the collection of each sample. Each sample designation is notated as follows: JP-(serial number).

Sample JP-C-503736 was collected from one of the two transformers located in Room 1 on the first floor of Plant J-1. This grab sample was collected from hardened oil residue which appeared to be leaking from the base of a pipe and a valve on the transformer. The pipes to this transformer appeared to be rusted.

Sample JP-L-249412 was collected from Room 2 on the fourth floor of Plant J-2. This grab sample was collected from hardened oil residue around a valve on the transformer which appeared to be leaking and from hardened oil on the floor beneath the valve.

Sample JP-C-856281 was collected from Room 1 on the fourth floor of Plant J-2. This grab sample was collected from hardened oil residue on the floor and base of the transformer.

Sample JP-C-656340 was a wipe sample collected from a plug and its associated pipe located on

the underside of one section of the cooling pipes from the northwestern most transformer in the outdoor substation. The plug appeared to have a drip of unknown liquid suspended from it when the wipe sample was collected.

Sample JP-C-657612 was collected from the southwestern most transformer in the outdoor substation. The composite sample consisted of rust and residue found on the base of one section of cooling pipes and, rust stained soils which also appeared to have a slight oily discoloration. The soils were located below the rusted cooling pipes which were sampled for the composite. All samples were analyzed for total PCBs.

At 1515 hours, sampling activities were completed and START members began to pack equipment and supplies. At 1530 hours, START and U.S. EPA OSC Auker departed the site.

On August 12, 1999, at 0845 hours, START member Mayer returned to site to document that all doorways to the rooms containing the transformers observed on August 11, 1999, were secured. Room 1 of Plant J-1 had two access doors. The first door was a large overhead bay door which can only be raised with the use of a forklift. This door was closed and several metal frames which had been moved by a forklift had been placed in front of the door. The second door was of standard size. The door was tack welded shut, a 2-ton block of concrete was placed in front of the door and several metal frames were placed in front of the concrete block. The door to Room 2 of Plant J-1 was pinned closed from the outside with a 2-ton block of concrete. Room 5 of Plant J-1 had two doorways. Both doors appeared to have been tack welded shut. The door to Room 6 of Plant J-1 appeared to have been tack welded shut. The door to Room 1 of Plant J-2 appeared to have been tack welded shut. Two metal bars were welded across the open window in the door in order to prevent entrance into the room. The door to Room 2 of Plant J-2 appeared to have been tack welded shut.

On the western side of Plant J-1 there was a dock bay door which was not secured. However, a large heavy metal grate and metal cylinder had been placed across the access path to the bay door. The gate to the outdoor electrical substation was closed; however, there was no locking mechanism in place to prevent pedestrian or vehicle entrance into the fenced area. The Pumphouse had three access doors. The large bay door on the eastern side could only be opened by using the pulley and chain on the inside of the building. The second door on the eastern side appeared to be locked and secured. The door on the western side of the Pumphouse also appeared to be locked and secured. There was an elevated broken window on the western side of the Pumphouse which was being used by site personnel to gain access into the building. The window could only be reached with a ladder. The window could be unlocked by reaching through a broken out pane of glass and turning the lock. After completing site documentation, START member

Mayer departed site at 1015 hours.

On August 13, 1999, the samples were received at DLZ Laboratories, Inc. (DLZ), Columbus, Ohio, under chain of custody number 5-25353.

<p>Table 3-1</p> <p>TRANSFORMER LOCATIONS AND LABELING</p> <p>JEFFERSON PROCESSING SITE</p> <p>MINGO JUNCTION, OHIO</p> <p>August 11, 1999</p>			
Transformer ID Number	Building Location	Room/Floor Designation	Labeling Information
C-505415	Plant J-1	Room 1/Floor 1	General Electric Pyranol Transformer
C-503736	Plant J-1	Room 1/Floor 1	General Electric Pyranol Unit Substation Transformer
C-856081	Plant J-1	Room 2/Floor 1	General Electric Pyranol Unit Substation Transformer
C-503735	Plant J-1	Room 5/Floor 3	General Electric Pyranol Unit Substation Transformer
C-657628	Plant J-1	Room 6/Floor 3.5	General Electric Transformer, Ohio Transformer Corporation, Inc., testing label indicating PCB concentration of 136 ppm
C-657612	Outdoor Substation	-----	General Electric Transformer, PCB-Contaminated
C-656341	Outdoor Substation	-----	General Electric Unit Substation Transformer, Contains PCBs
C-656340	Outdoor Substation	-----	General Electric Unit Substation Transformer, PCB-Contaminated
C-856281	Plant J-2	Room 1/Floor 4	General Electric Pyranol Unit Substation Transformer
C-249412	Plant J-2	Room 2/Floor 4	General Electric Transformer
C-856282	Pumphouse	-----	General Electric Pyranol Unit Substation Transformer

Key :

ID = identification.

PCB = polychlorinated biphenyls.

ppm = parts per million.

Source :

Ecology and Environment, Inc., 1999.

4. Analytical Results

The samples were analyzed by DLZ Laboratories, Inc., under TDD number S05-9903-807. A summary of the analytical results is presented in Tables 4-2, and validated data appears in Appendix A. A total of 5 samples were collected, including 4 solid and 1 wipe sample. All samples were analyzed for total PCBs.

Results for the wipe sample JP-C-656340 were below the detection limit except for PCB-1016 at 2.0 micrograms per wipe ($\mu\text{g/wipe}$) and PCB-1260 at 34 $\mu\text{g/wipe}$. All results for sample JP-C-657612 were below the detection limit of 0.2 milligrams per kilogram (mg/kg) except for PCB-1260 at 2.3 mg/kg . All results for sample JP-C-503736 were below a detection limit of 50,000 mg/kg except for PCB-1260 at 278,000 mg/kg . All results for sample JP-L-249412 were below a detection limit of 10 mg/kg except for PCB-1260 at 38 mg/kg . All results for sample JP-C-856281 were below a detection limit of 50,000 except for PCB-1260 at 212,000 mg/kg .

<p>Table 4-1</p> <p>START OIL RESIDUE SAMPLES POLYCHLORINATED BIPHENYLS ANALYSIS JEFFERSON PROCESSING SITE MINGO JUNCTION, OHIO</p> <p>August 27, 1999 (units = mg/kg [ppm])</p>							
Sample Designation	Parameter						
	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260
JP-C-657612	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	2.3 J
JP-C-503736	< 50,000	< 50,000	< 50,000	< 50,000	< 50,000	< 50,000	278,000
JP-L-249412	< 10	< 10	< 10	< 10	< 10	< 10	38
JP-C-856281	< 50,000	< 50,000	< 50,000	< 50,000	< 50,000	< 50,000	212,000

Key:

mg/kg = milligram per kilogram.
 ppm = parts per million.
 PCB = polychlorinated biphenyls.
 < = less than.
 J = estimated value.

Source:

Samples analyzed by DLZ Laboratories, Inc., Columbus, Ohio, under TDD number S05-9903-807.

Table 4-2

START OIL RESIDUE WIPE SAMPLES
 POLYCHLORINATED BIPHENYLS ANALYSIS
 JEFFERSON PROCESSING SITE
 MINGO JUNCTION, OHIO

August 27, 1999
 (units = $\mu\text{g}/\text{Wipe}$ [ppb])

Sample Designation	Parameter						
	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260
JP-C-656340	2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	34

Key:

$\mu\text{g}/\text{Wipe}$ = micrograms per wipe sample.
 ppb = parts per billion.
 PCB = polychlorinated biphenyls.
 < = less than.

Source:

Samples analyzed by DLZ Laboratories, Inc., Columbus, Ohio, under TDD number S05-9903-807

5. Discussion of Potential Threats

Paragraph (b)(2) of Part 300.415 of the National Contingency Plan lists factors to be considered when determining the appropriateness of a potential removal action at a site. The following discussion presents a summary of those factors which are applicable to the Jefferson Processing Site.

- **Actual or potential exposure of nearby human populations, animals, or the food chain to hazardous substances or pollutants or contaminants.** Approximately 159 capacitors and several PCB transformers were documented at the Jefferson Processing Site. As stated in 40 Code of Federal Regulations (CFR) Subpart B 761.20: "...the Administrator hereby finds... PCBs at concentrations of 50 ppm or greater and PCB Items with PCB concentrations of 50 ppm or greater present an unreasonable risk of injury to health within the United States." and "... any exposure of human beings or the environment to PCBs, as measured or detected by any scientifically acceptable analytical method, may be significant, depending upon such factors as the quantity of PCBs involved in the exposure, the likelihood of exposure to humans and the environment, and the effect of the exposure."

Although the rooms containing the transformers have been welded shut or have been blockaded with concrete slabs which must be moved by heavy machinery, pedestrian traffic through Plants J-1 and J-2 is possible. Although access to the Pumphouse is restricted, access is still possible with the use of a ladder through a western window which has a broken pane of glass. The capacitors are staged in a separate room which is secured by locks on the access doors.

Previous vandalism has been documented at the Jefferson Processing Site. With the correct equipment, it could be possible for vandals to gain access into the rooms which contain the transformers. Once inside the rooms, vandals could potentially tamper with the transformers to obtain any salvageable parts and metals. Tampering with the transformers could potentially cause a release of the PCB oil which is contained in them.

- **Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.** Several transformers documented on site were labeled as containing PCBs. Transformers C-657612 and C-656340 are both marked with labels stating that they are "PCB contaminated electrical equipment." Transformer C-656341 is marked with a label stating that it "contains PCBs." Transformer C-657628 is marked with an Ohio Transformer Corporation,

Louisville, Ohio, label that identifies it as containing oil which was sampled, analyzed on March 12, 1986, and found to contain 136 ppm PCBs.

As stated in 40 CFR Subpart B 761.30 paragraph (a)(1)(x), "If a PCB Transformer is found to have a leak which results in any quantity of PCBs running off or about to run off the external surface of the transformer, then the transformer must be repaired or replaced to eliminate the source of the leak. In all cases any leaking material must be cleaned up and properly disposed of according to disposal requirements of §761.60. Cleanup of the released PCBs must be initiated as soon as possible..." Several transformers were observed to have leaked oil onto the concrete floors. Floor drains were also observed within close proximity to two of the transformers in question. A floor drain was located within 5 feet of transformer C-856281, and within 5 feet of the oil leakage on the floor from the transformer. A floor drain was also observed directly adjacent to the southwest corner of transformer C-856282 located in the Pumphouse.

The cooling pipes on transformers C-503736, C-856081, and C-657612 were observed to be significantly corroded. Oil stains below plugs and valves on transformers C503736, C-657612, C-656340, C-856281, and L-249412 were visible. Transformers L-249412 and C-856281 exhibited the greatest amount of oil leakage on the flooring below their cooling pipes, valves, and plugs. Oil residue was observed around valves and plugs also. Transformers C-657612 and C-656340 exhibited oil stains on the soil/gravel surface below their cooling pipes. The outdoor substation where these transformers are located is fenced in; however, the gates to the fence are not secured with any locking mechanism.

The potential of a release of leaking transformer oil through present floor drains does exist on site. Several transformers were observed to be in deteriorating condition due to rusting of the cooling pipes. Further deterioration over time will potentially contribute to the likelihood of a larger release from the transformers. Five transformers were observed to show visible signs of historic leakage on the floor or soil/gravel beneath them.

According to 40 CFR Subpart D 761.60 paragraph (d)(1): "Spills and other uncontrolled discharges of PCBs at concentrations of 50 ppm or greater constitute the disposal of PCBs. (2) PCBs resulting from the cleanup and removal of spills, leaks, or other uncontrolled discharges, must be stored and disposed of in accordance with paragraph (a) of this section." According to 40 CFR Subpart D 761.123: "The concentration of PCBs spilled is determined by the PCB concentration in the material spilled as opposed to the concentration of PCBs in the material onto which the PCBs were spilled." Oil residues sampled from transformers C-503736 and C-856281 and the floor areas onto which the leaks occurred were determined to contain PCB concentrations excessively greater than 50 ppm. The oil residue sample from JP-C-503736 was identified as containing 278,000 ppm of PCB-1260. The oil residue sample from JP-C-856281 was identified as containing 212,000 ppm of PCB-1260. The excessive levels of PCBs in the oil residue samples indicate that PCB-contaminated oil was released from the transformers. Therefore, the transformers contained or still contain an amount of PCB-contaminated oil.

The transformers identified to be present on site are currently not in operation, nor do they appear to have been in operation for some time. It does not appear that any work involving the transformers has been initiated. Due to these circumstances, it could be interpreted that the transformers are in a state of storage. According to CFR 40 Subpart D 761.65 paragraph (b):

“...owners and operators of any facilities used for the storage of PCBs and PCB Items designated for disposal shall comply with the following requirements: (1) The facilities shall meet the following criteria: (i) Adequate roof and walls to prevent rain water from reaching the stored PCBs and PCB Items; (ii) An adequate floor which has continuous curbing with a minimum six inch high curb. The floor and curbing must provide a containment volume equal to at least two times the internal volume of the largest PCB Article or PCB Container stored therein or 25 percent of the total internal volume of all PCB Articles or PCB Containers stored therein, whichever is greater; (iii) No drain valves, floor drains...or other openings that would permit liquids to flow from the curbed area; (iv) Floors and curbing constructed of continuous smooth and impervious materials...” None of the transformers observed on site have curbing to provide containment. Two transformers were viewed to be within 5 feet of open floor drains. The west wall of Room 1 in Plant J-1 was observed to have poor structural integrity. The walls of the other rooms containing transformers appeared to be of good integrity. The dirt floors on the ground levels of Plants J-1 and J-2 were observed to be muddy in some areas, thus indicating the infiltration of water through holes in the roof, walls, and open doorways of the main structures. However, the ceilings of the rooms which contained transformers appeared to be of good integrity.

Specific options for disposal of PCB transformers and capacitors are referenced in 40 CFR. As stated in 40 CFR Subpart D 761.60 paragraph (b)(1): “PCB Transformers shall be disposed of in accordance with either of the following: (A) In an incinerator that complies with §761.70; or (B) In a chemical waste landfill which complies with §761.75; *Provided*, That the transformer is first drained of all free flowing liquid, filled with solvent, allowed to stand for at least 18 hours, and then drained thoroughly. PCB liquids that are removed shall be disposed of in accordance with paragraph (a)...” of subpart D. As stated in 40 CFR Subpart D 761.60 paragraph (b)(2)(ii): “Any person may dispose of PCB Small Capacitors as municipal solid waste, unless that person is subject to the requirements of paragraph (b)(2)(iv)...” of Subpart D. “(iii) Any PCB Large High or Low Voltage Capacitor which contains 500 ppm or greater PCBs, owned by any person, shall be disposed of in accordance with either of the following: (A) Disposal in an incinerator that complies with § 761.70. (v) Notwithstanding the restrictions imposed by paragraph (b)(2)(iii)(B) or (b)(2)(iv)(B)...PCB capacitors may be disposed of in PCB chemical waste landfills that comply with § 761.75 subsequent to March 1, 1981 if...” a notice has been published “in the Federal Register declaring that those landfills are available for such disposal and explaining the reasons for the extension or reopening.”

- **Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.** Southeastern Ohio receives a substantial amount of rainfall during the spring and autumn seasons. Winter temperatures are normally below freezing with significant snowfall. During the autumn, winter and spring, this area is subject to freeze-thaw cycles. The rooms which contain the transformers are unheated and therefore are subject to the weather extremes as they occur in the region. Over time the weather conditions would be suspected to continue to compromise the structural integrity of the transformers parts such as valves, valve seals and the walls of the unit. Continued degradation of the structural integrity increases the threat and likelihood of a release. Dampness in the transformer rooms and the current rusting of the transformers has already been observed. The rusting and potential leaking already observed can only worsen due to climate conditions.

6. Summary

The Jefferson Processing Site is located on County Road 74 (Gould Road), Mingo Junction, Jefferson County, Ohio. Vehicle access to the site is restricted by a gate across the access road to the site. Vehicle access into Plants J-1 and J-2 is restricted by heavy blockades created with remnant concrete cylinders and blocks, and large metal remnants that require heavy machinery to be moved. However, pedestrian access into the buildings is possible. On-site security occurs for 8 hours a day, 40 hours a week. It has previously been reported that vandals had removed equipment including transformers from the site property since Ms. Glorious had purchased the property. On August 11, 1999, U.S. EPA OSC Auker and START conducted site assessment activities. START returned to site on August 12, 1999, to document that access to the transformer rooms had been secured. Laboratory analyses conducted on five samples collected at the site indicated the presence of low and high concentrations of PCB wastes on site. The highest concentrations identified were 278,000 ppm PCB-1260 for JP-C-503736, and 212,000 ppm PCB-1260 for JP-C-856281.



SITE: Jefferson Processing Site **TDD:** S05-9906-019

DIRECTION: West

DATE: 8/12/99

PAN: 9M0801SIXX **PHOTO:** 1

PHOTOGRAPHER: Mayer

DESCRIPTION: Photograph 1 of 5 which when assembled left to right provides an overview of the Jefferson Processing Site property as seen from the driveway on site.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

DIRECTION: West

DATE: 8/12/99

PAN: 9M0801SIXX **PHOTO:** 2

PHOTOGRAPHER: Mayer

DESCRIPTION: Photograph 2 of 5 which when assembled left to right provides an overview of the Jefferson Processing Site property as seen from the driveway on site.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

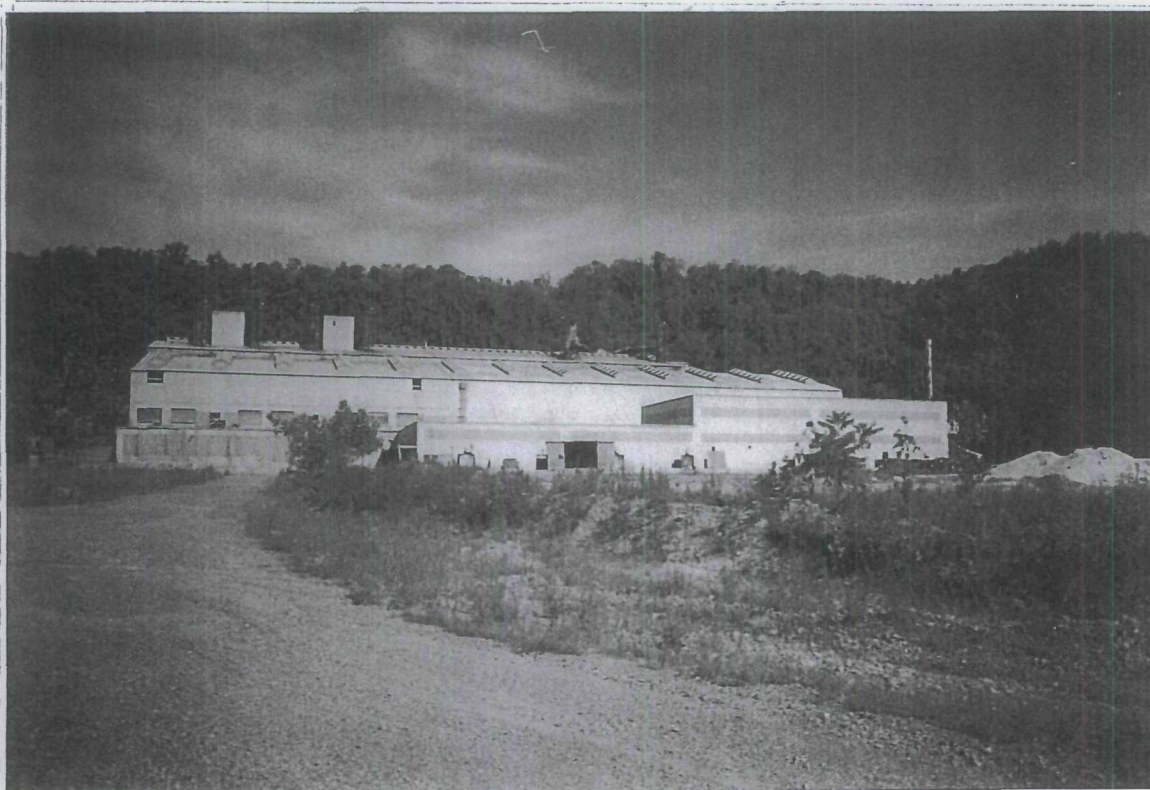
PAN: 9M0801SIXX **PHOTO:** 3

DIRECTION: Northwest

DATE: 8/12/99

PHOTOGRAPHER: Mayer

DESCRIPTION: Photograph 3 of 5 which when assembled left to right provides an overview of the Jefferson Processing Site property as seen from the driveway on site.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

PAN: 9M0801SIXX **PHOTO:** 4

DIRECTION: Northwest

DATE: 8/12/99

PHOTOGRAPHER: Mayer

DESCRIPTION: Photograph 4 of 5 which when assembled left to right provides an overview of the Jefferson Processing Site property as seen from the driveway on site.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

PAN: 9M0801SIXX **PHOTO:** 5

DIRECTION: North

DATE: 8/12/99

PHOTOGRAPHER: Mayer

DESCRIPTION: Photograph 5 of 5 which when assembled left to right provides an overview of the Jefferson Processing Site property as seen from the driveway on site.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

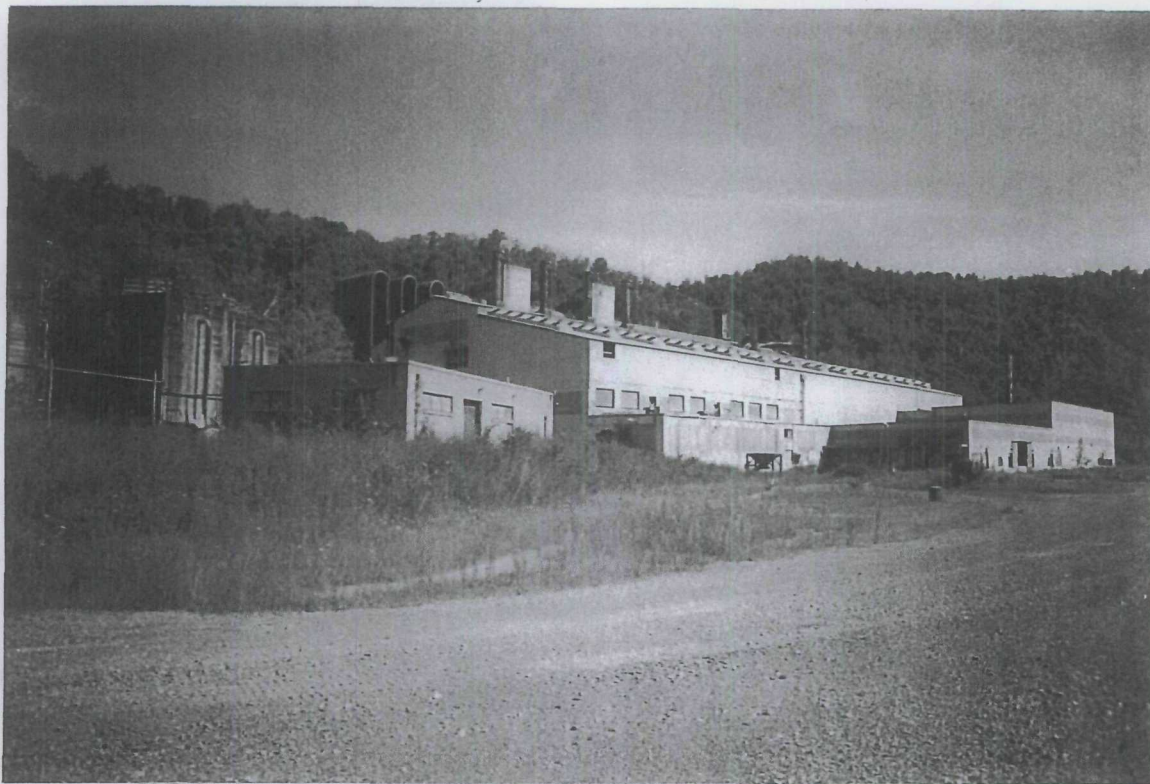
PAN: 9M0801SIXX **PHOTO:** 6

DIRECTION: West

DATE: 8/12/99

PHOTOGRAPHER: Mayer

DESCRIPTION: Close-up view of Plant J-2 on site.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

DIRECTION: Northwest

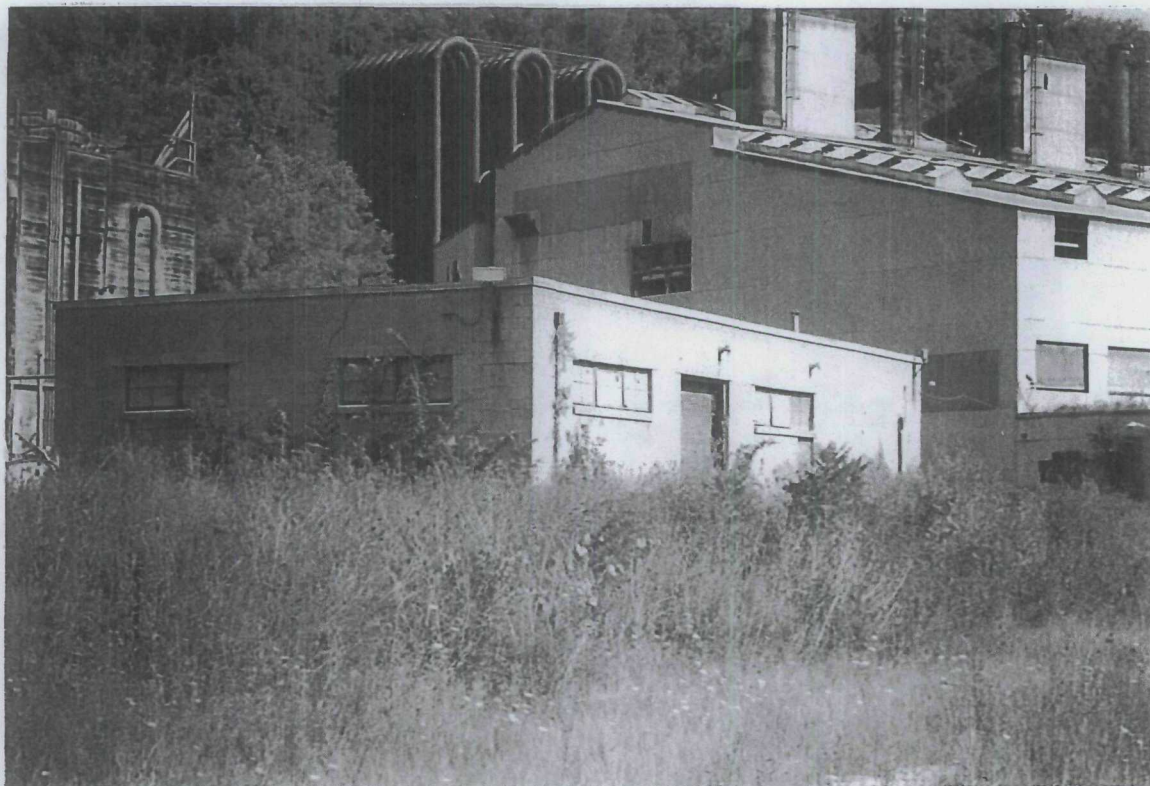
DATE: 8/12/99

PAN: 9M0801SIXX

PHOTO: 7

PHOTOGRAPHER: Mayer

DESCRIPTION: Close-up view of Plant J-1on site. Plant J-1 is the larger building complex. The smaller building in the foreground is the Pumphouse.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

DIRECTION: Northwest

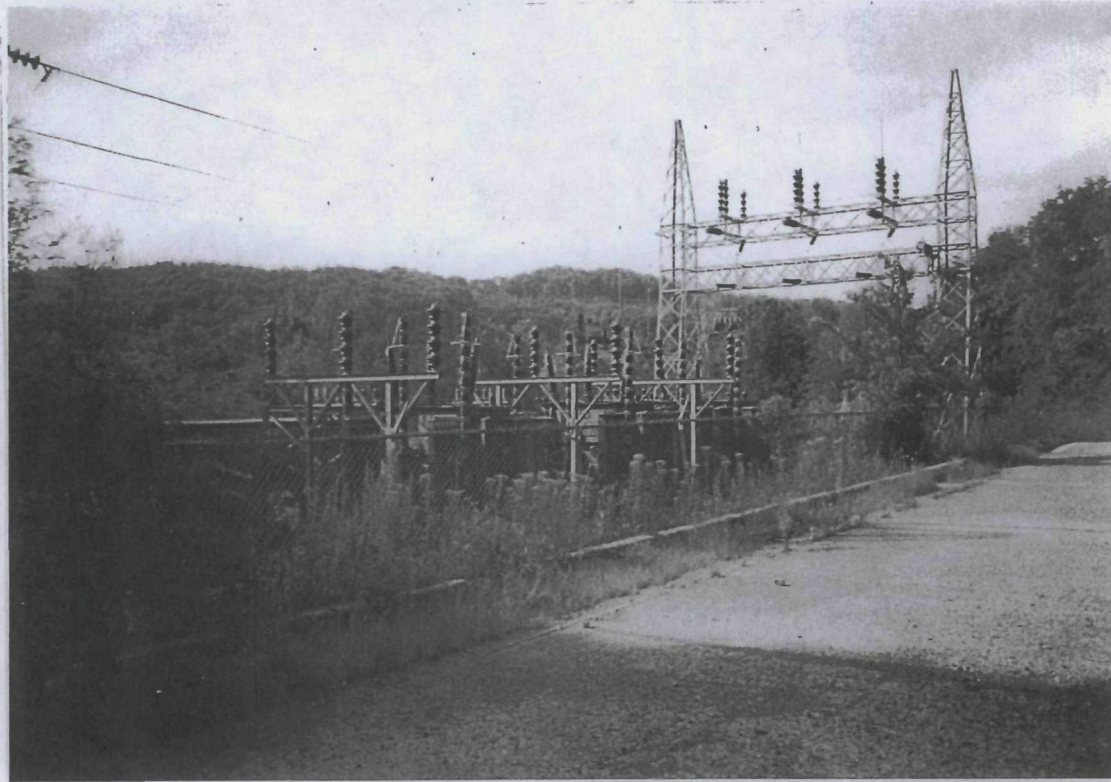
DATE: 8/12/99

PAN: 9M0801SIXX

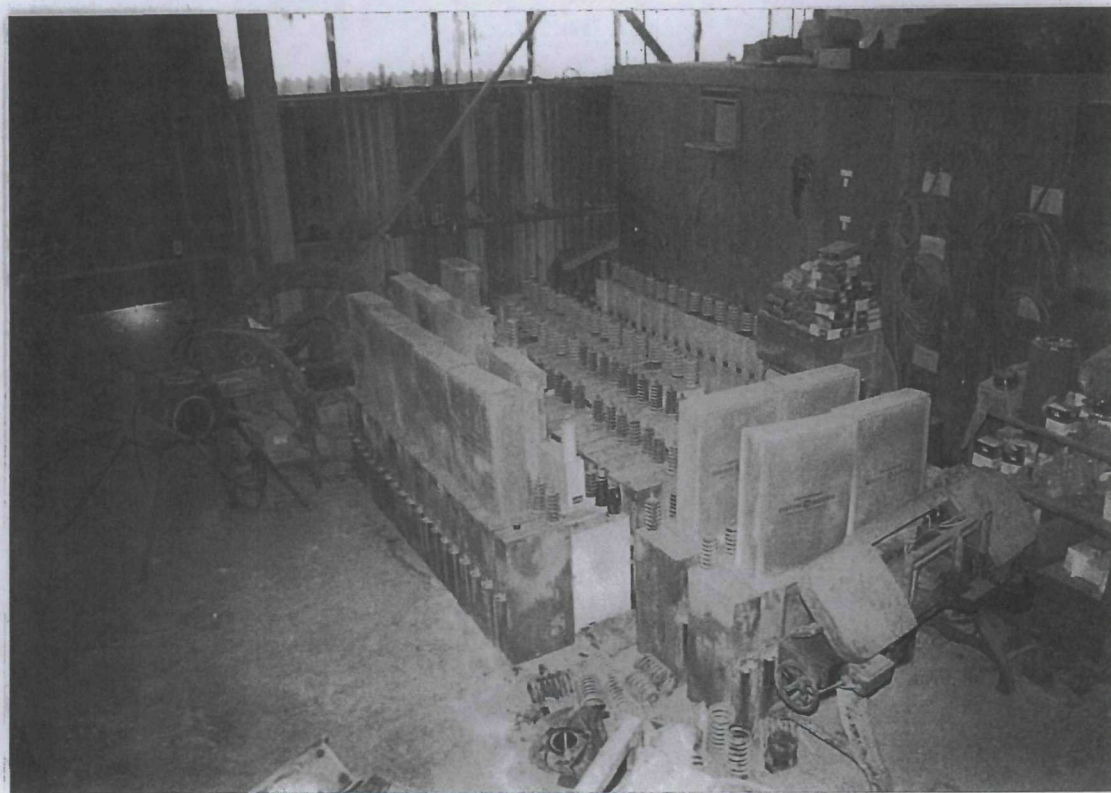
PHOTO: 8

PHOTOGRAPHER: Mayer

DESCRIPTION: Close-up view of the Pumphouse.



SITE: Jefferson Processing Site **TDD:** S05-9903-008 **PAN:** 9M0801SIXX **PHOTO:** 9
DIRECTION: South **DATE:** 8/12/99 **PHOTOGRAPHER:** Mayer
DESCRIPTION: A fenced electrical substation is located southwest of Plant J-1. The substation includes 3 transformers.



SITE: Jefferson Processing Site **TDD:** S05-9903-008 **PAN:** 9M0801SIXX **PHOTO:** 10
DIRECTION: South **DATE:** 8/11/99 **PHOTOGRAPHER:** Mayer
DESCRIPTION: Approximately 159 capacitors which had been found around the site have been staged in a room on the first floor of Plant J-1. The room is located on the southeast portion of Plant J-1.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

DIRECTION: North

DATE: 8/11/99

PAN: 9M0801SIXX

PHOTO: 11

PHOTOGRAPHER: Mayer

DESCRIPTION: A large overhead bay door had to be raised and held open with a tow motor due to its weight in order to gain access into Room 1 of Plant J-1.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

DIRECTION: Northwest

DATE: 8/11/99

PAN: 9M0801SIXX

PHOTO: 12

PHOTOGRAPHER: Mayer

DESCRIPTION: Transformer C-505415 was labeled with a metal plate identifying it as a General Electric Pyranol Transformer. This transformer was located in Room 1, Plant J-1.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

PAN: 9M0801SIXX **PHOTO:** 13

DIRECTION: Northwest

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: A spot of oil residue was observed below a plugged opening on transformer C-505415. The plug does not appear to be leaking currently.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

PAN: 9M0801SIXX **PHOTO:** 14

DIRECTION: Southeast

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: Transformer C-503736 was labeled with a metal plate identifying it as a General Electric Pyranol Unit Substation Transformer. This transformer was located in Room 1, Plant J-1. Rust development on the cooling pipes was observed by START and IIS EPA



SITE: Jefferson Processing Site

TDD: S05-9903-008

PAN: 9M0801SIXX

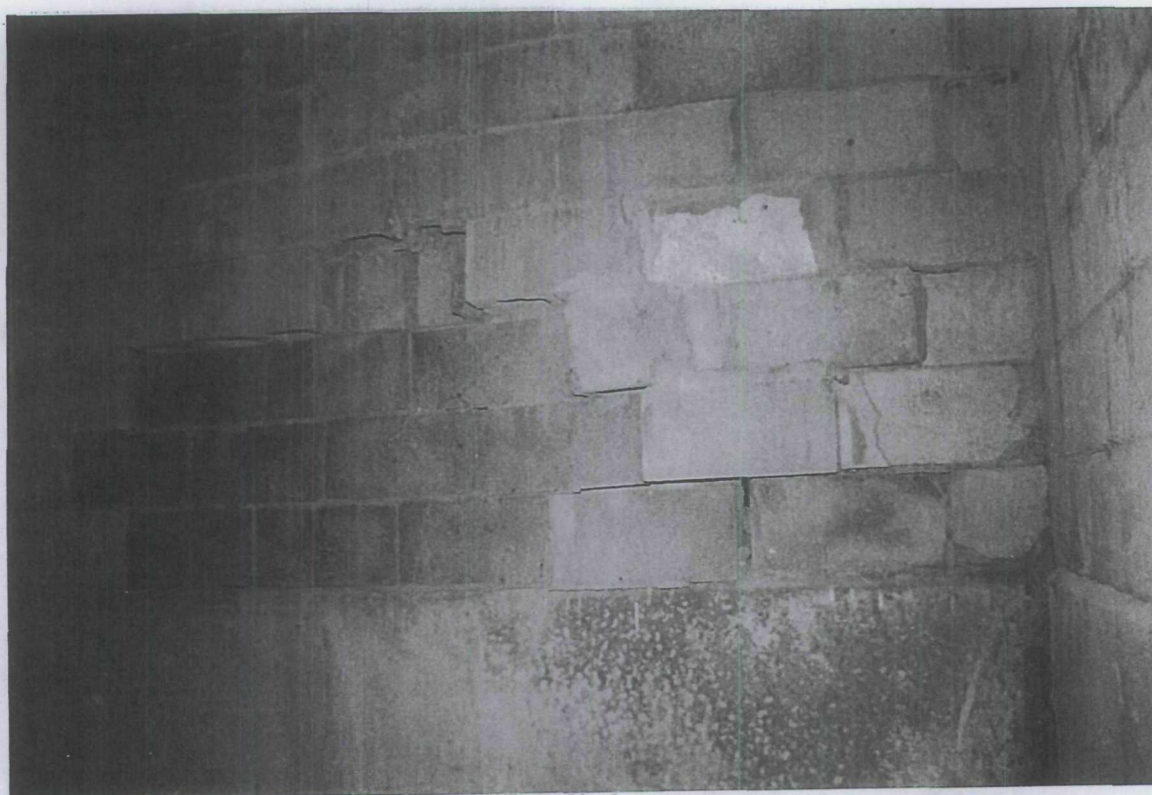
PHOTO: 15

DIRECTION: Southeast

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: Oil residue was also observed to be accumulated on the ends of one of the cooling pipes for transformer C-503736. A spot of oil residue was observed below this accumulation on the pipe.



SITE: Jefferson Processing Site

TDD: S05-9903-008

PAN: 9M0801SIXX

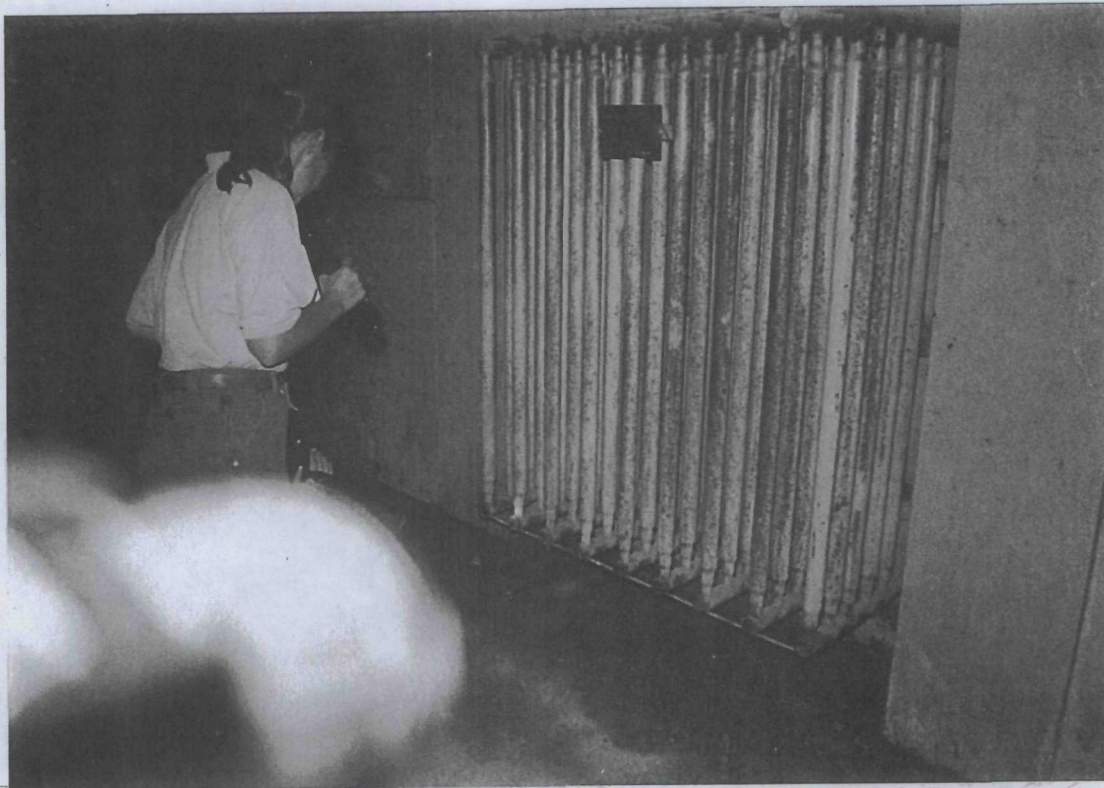
PHOTO: 16

DIRECTION: Northwest

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: The northwest wall of Room 1, Plant J-1, was observed to be of poor structural integrity. It also appears that previous attempts to repair the wall were conducted.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

PAN: 9M0801SIXX **PHOTO:** 17

DIRECTION: Northwest

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: Transformer C-856081, located in Room 2, Plant J-1, was observed to be significantly rusted especially on the cooling pipes. The atmosphere in Room 2 was observed to be very damp.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

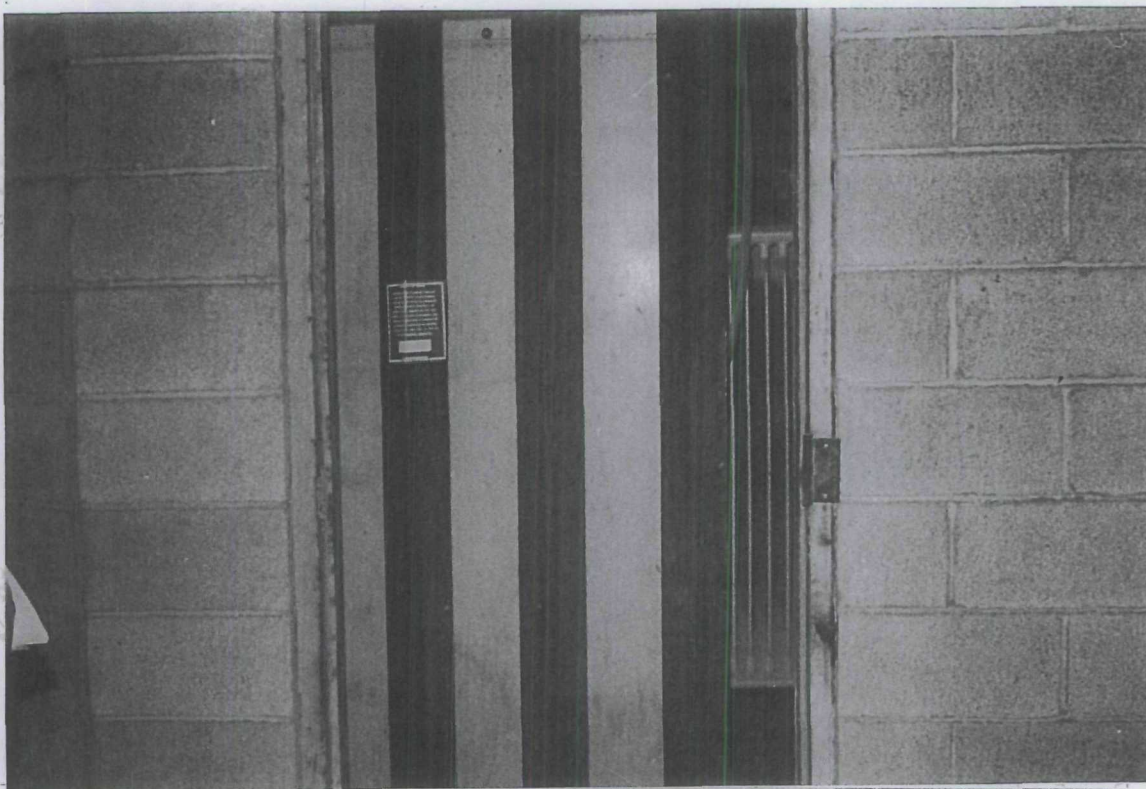
PAN: 9M0801SIXX **PHOTO:** 18

DIRECTION: Northwest

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: This is a close-up view of the rusted cooling pipes on transformer C-856081.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

DIRECTION: Northwest

DATE: 8/11/99

PAN: 9M0801SIXX **PHOTO:** 19

PHOTOGRAPHER: Mayer

DESCRIPTION: Room 3 on the third floor of Plant J-1 was inaccessible due to large metal bars which were welded across the door frame. A blue label on one of the bars identifies the transformer in the room as containing dielectric fluid of less than 50 ppm PCBs.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

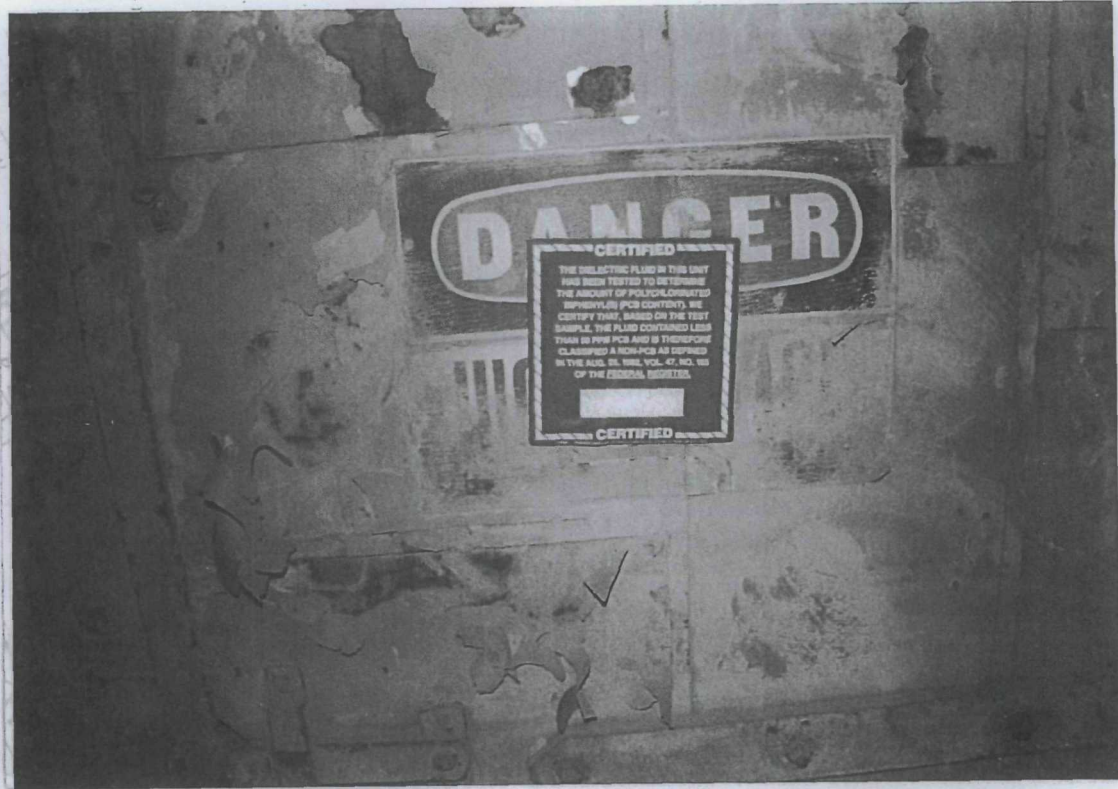
DIRECTION: Southwest

DATE: 8/11/99

PAN: 9M0801SIXX **PHOTO:** 20

PHOTOGRAPHER: Mayer

DESCRIPTION: Room 4 on the third floor of Plant J-1 was inaccessible due to the door being tack welded closed. The door was marked with the same label as the door frame of Room 3 on the third floor.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

PAN: 9M0801SIXX **PHOTO:** 21

DIRECTION: Southwest

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: This is a close-up view of the labels on the door of Room 4 and door frame of Room 3 in Plant J-1.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

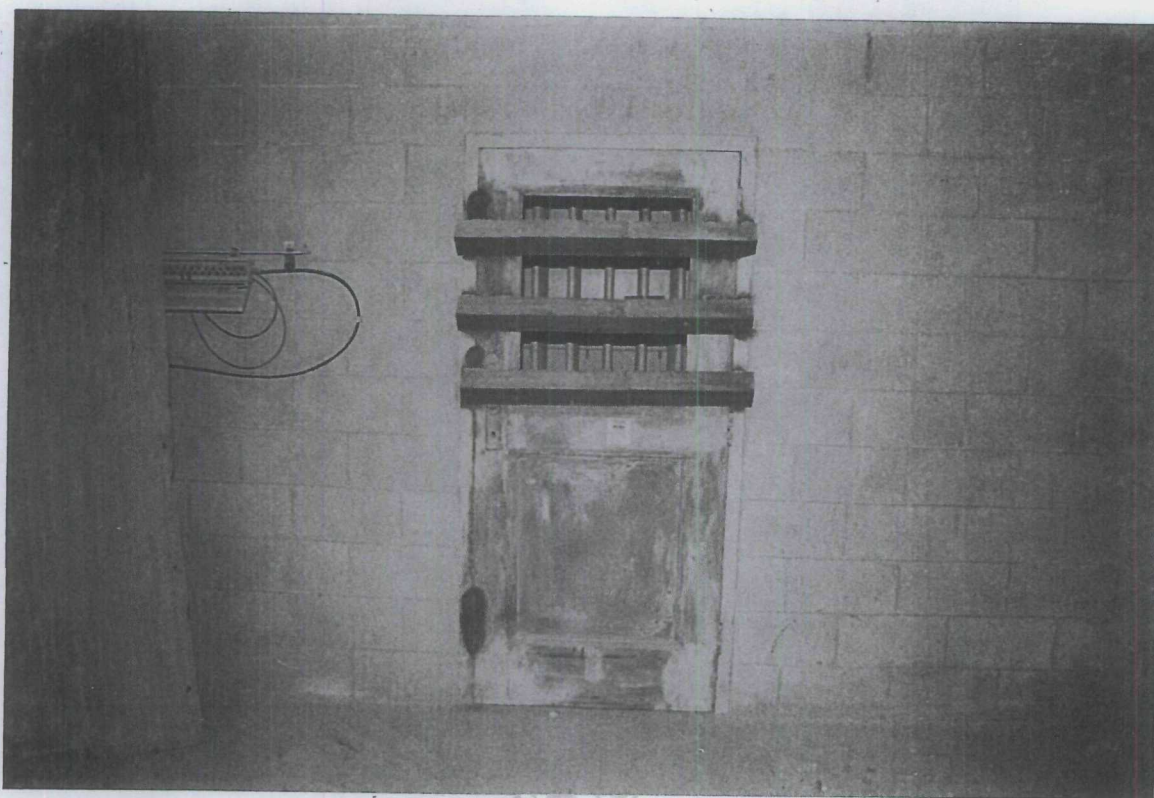
PAN: 9M0801SIXX **PHOTO:** 22

DIRECTION: Southwest

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: Room 5, Plant J-1, had two access doors. The first door is pictured here. This is the door which was used to access the room by START and U.S. EPA.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

PAN: 9M0801SIXX **PHOTO:** 23

DIRECTION: Northwest

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: This is the second door into Room 5, Plant J-1. The door is tack welded closed and three metal bars are welded across the open window in the door. The cooling pipes of transformer C-503735 can be seen through the window.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

PAN: 9M0801SIXX **PHOTO:** 24

DIRECTION: Northwest

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: A view of the metal ID plate on transformer C-503735. Notice the yellow PCB caution label located on the transformer case. A floor drain is located within five feet of this transformer. The transformer appears to be in good condition with minimal rusting evident.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

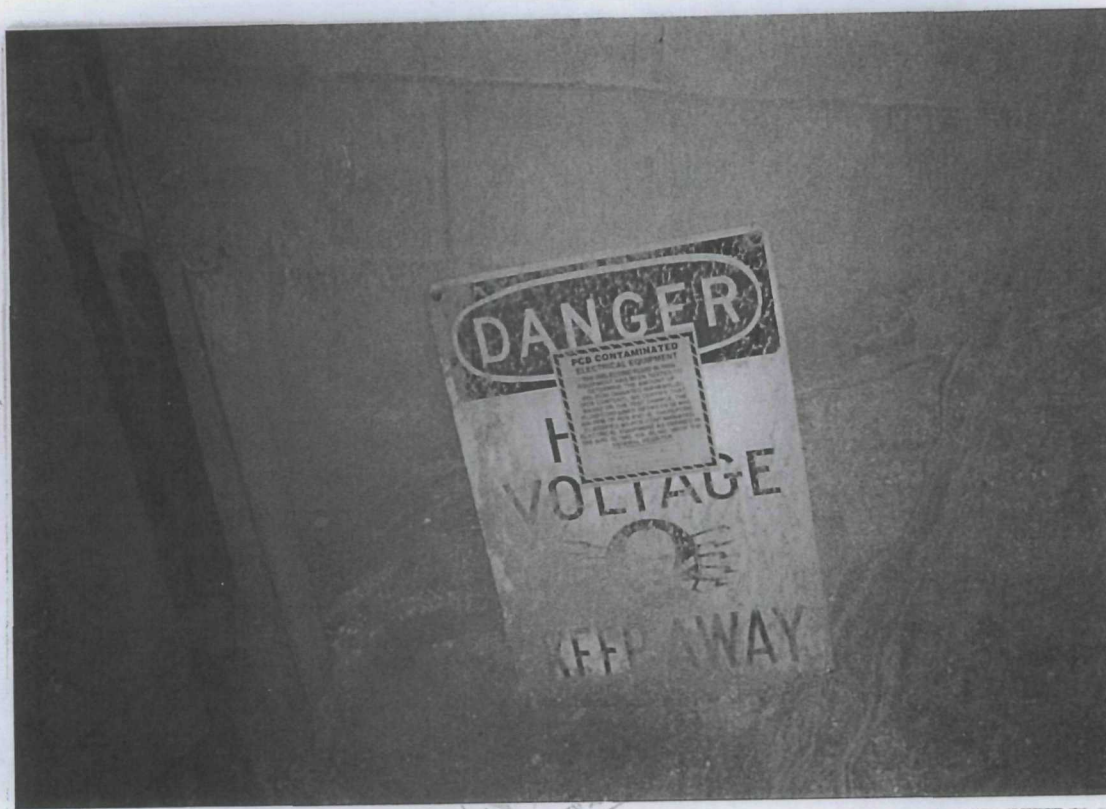
PAN: 9M0801SIXX **PHOTO:** 25

DIRECTION: Northeast

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: This is a view of the rear side of transformer C-503735. Minimal rusting was evident.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

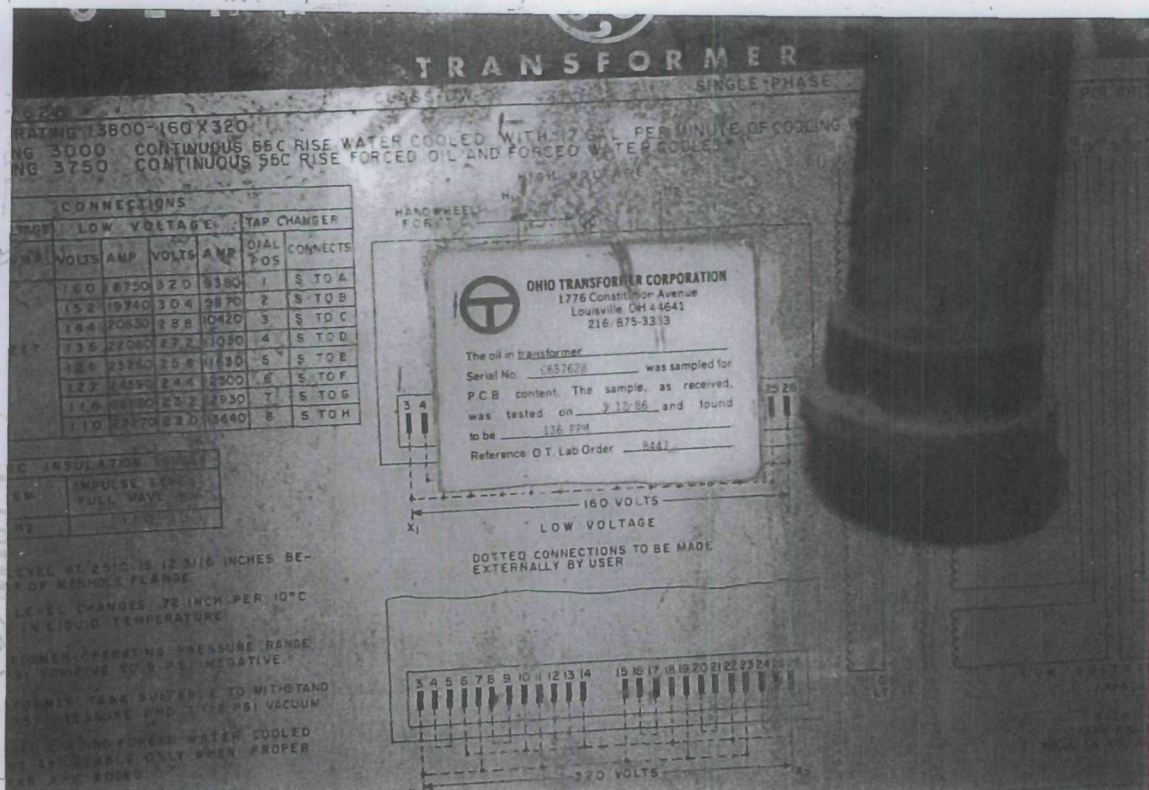
PAN: 9M0801SIXX **PHOTO:** 26

DIRECTION: Southwest

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: A "Danger High Voltage" sign was located adjacent to the door for Room 6, Plant J-1. This sign was marked with a label indicating the presence of "PCB Contaminated Electrical Equipment." Transformer C-657628 was located in this room.



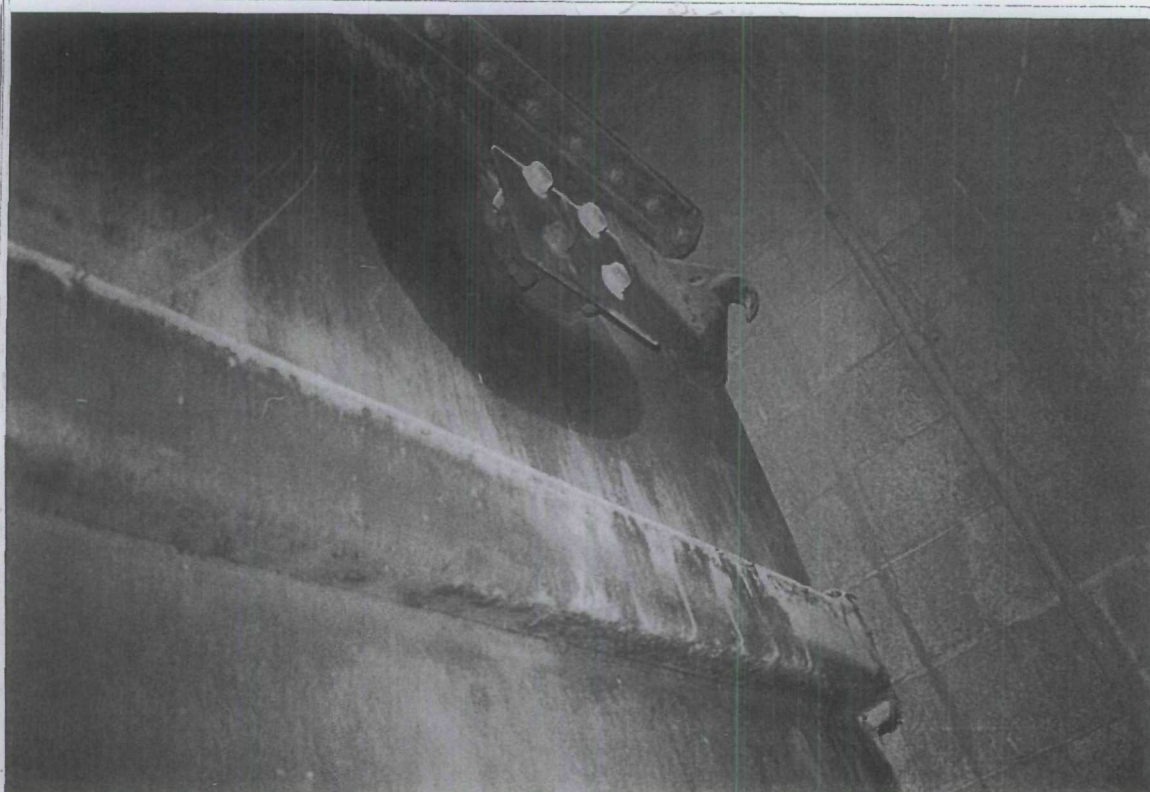
SITE: Jefferson Processing Site **TDD:** S05-9903-008

PAN: 9M0801SIXX **PHOTO:** 27

DIRECTION: Southeast **DATE:** 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: The metal ID plate on transformer C-657628 was marked with a label stating that the oil from the transformer had been sampled and was determined to contain 136 ppm PCBs by Ohio Transformer Corporation, Louisville, Ohio, in 1986.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

PAN: 9M0801SIXX **PHOTO:** 28

DIRECTION: N/A

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: A moisture/oil ring was observed around the circumference of an access port near the top of transformer C-657628 on one of its sides.



SITE: Jefferson Processing Site **TDD:** S05-9903-008
DIRECTION: Southeast **DATE:** 8/11/99

PAN: 9M0801SIXX **PHOTO:** 29
PHOTOGRAPHER: Mayer

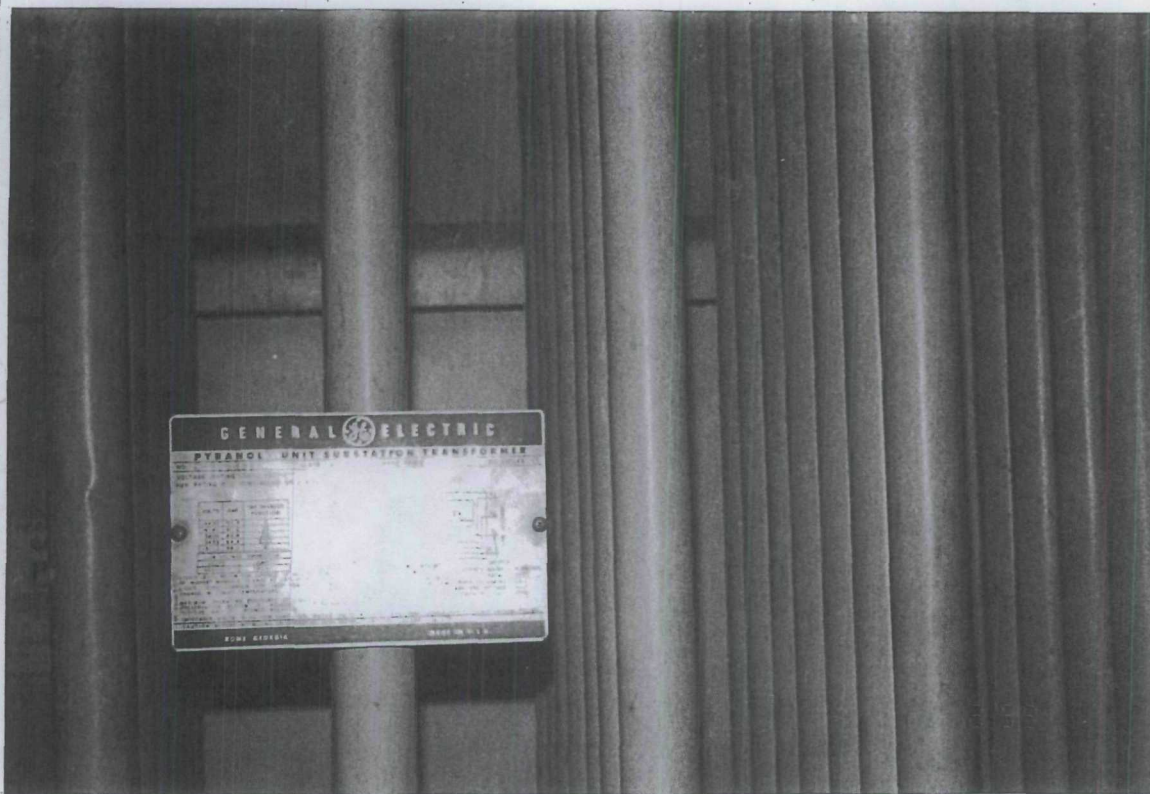
DESCRIPTION: A moisture/oil ring was observed around the base of transformer C-657628 on all four sides.



SITE: Jefferson Processing Site **TDD:** S05-9903-008
DIRECTION: Northwest **DATE:** 8/11/99

PAN: 9M0801SIXX **PHOTO:** 30
PHOTOGRAPHER: Mayer

DESCRIPTION: Room 1 on the fourth floor of Plant J-2 contained transformer C-856281.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

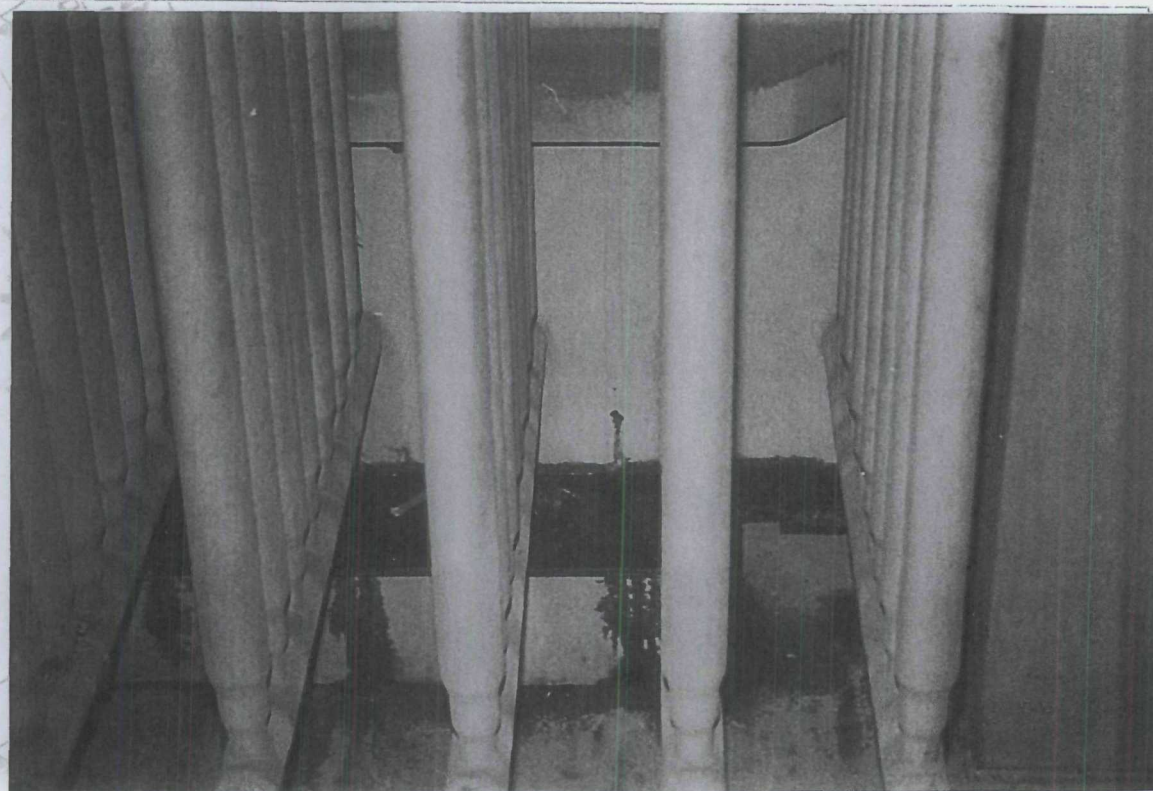
PAN: 9M0801SIXX **PHOTO:** 31

DIRECTION: Northwest

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: A view of the metal ID plate for transformer C-856281.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

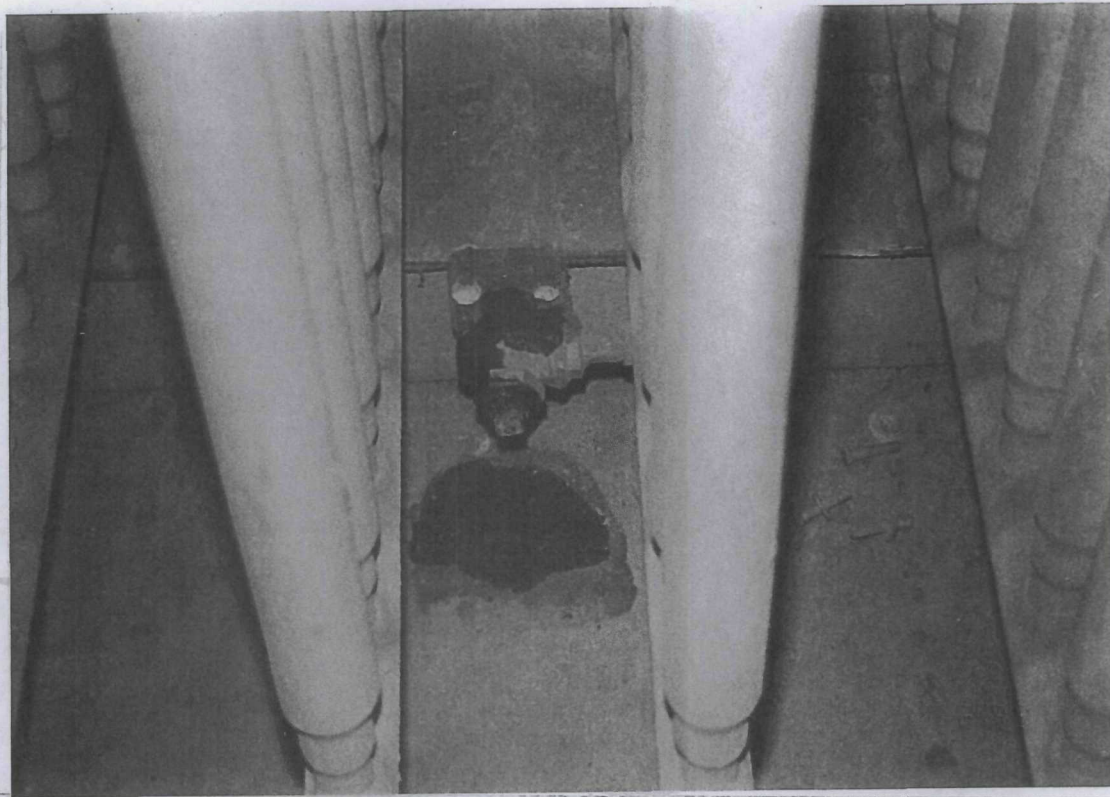
PAN: 9M0801SIXX **PHOTO:** 32

DIRECTION: Northwest

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: Oil residue was observed to have leaked from the base of transformer C-856281. A floor drain was within five feet of this oil residue.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

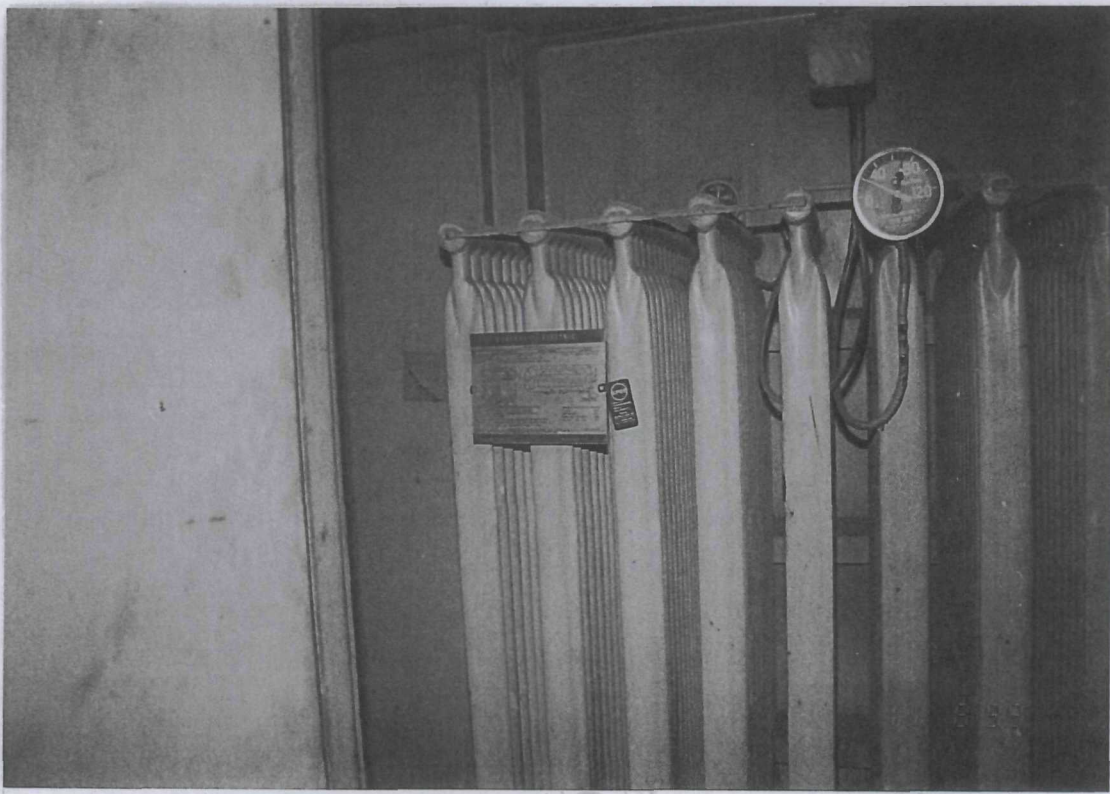
PAN: 9M0801SIXX **PHOTO:** 33

DIRECTION: Southeast

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: A plugged valve on the rear side of transformer C-856281 appeared to have oil residue accumulation around the plug. There was also an oil spot on the floor below the plugged valve.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

PAN: 9M0801SIXX **PHOTO:** 34

DIRECTION: Northwest

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: Transformer L-249412 was located in Room 2, Plant J-2, on the fourth floor.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

PAN: 9M0801SIXX **PHOTO:** 35

DIRECTION: Northwest

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: Heavy oil residue was observed on the floor of Room 2, Plant J-2, below a valve on transformer L-249412. The valve was also observed to have a heavy accumulation of oil on it.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

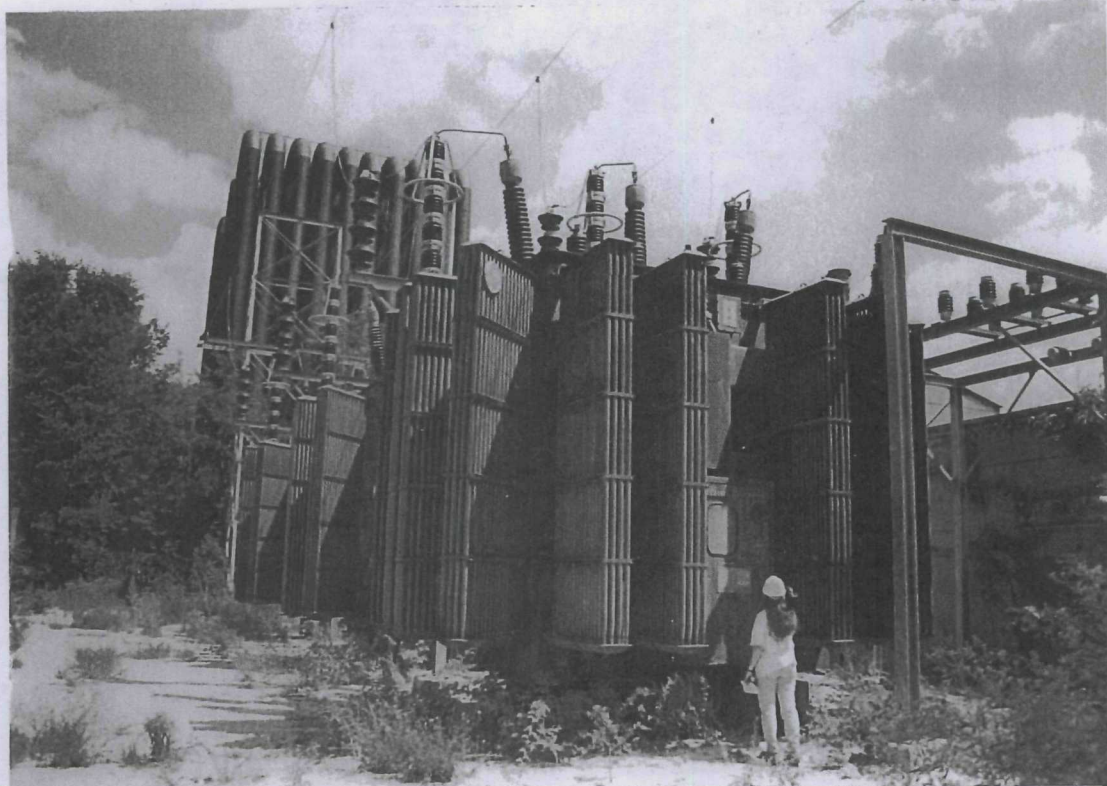
PAN: 9M0801SIXX **PHOTO:** 36

DIRECTION: Unknown

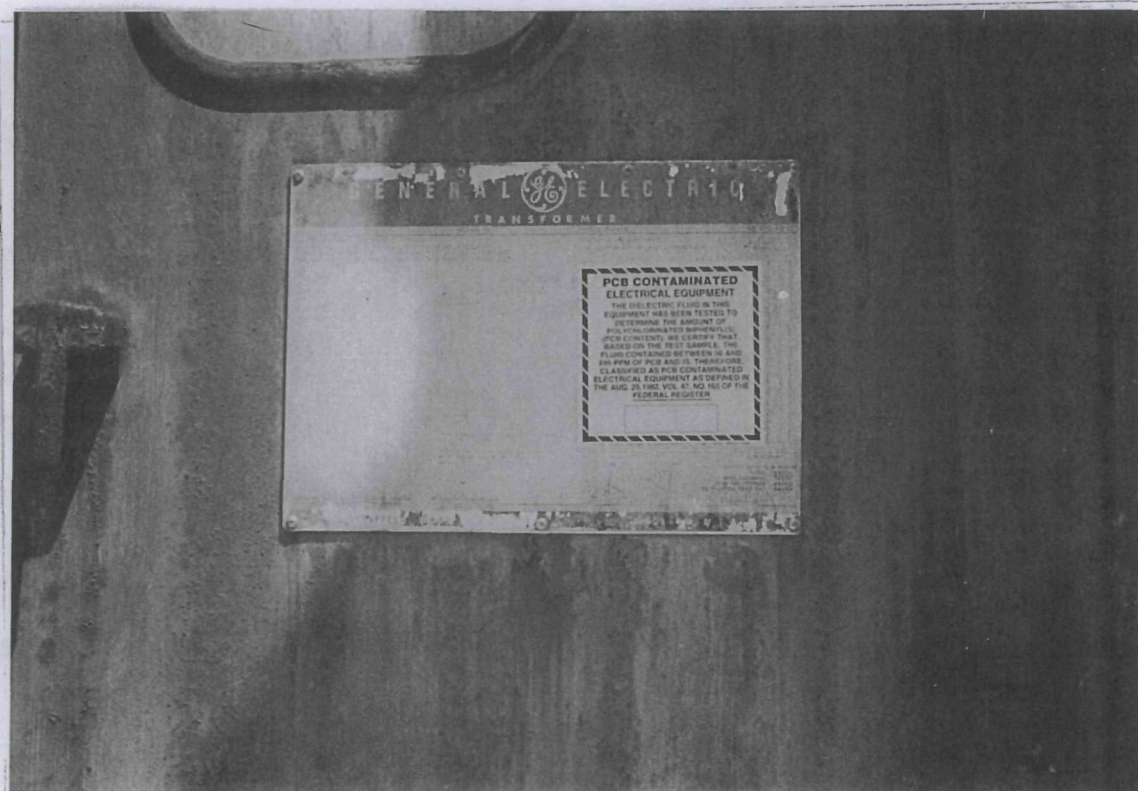
DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: Room 3 on the third floor of Plant J-2 was inaccessible due to being tack welded closed. The door was marked with a label indicating that the dielectric fluid in the unit was tested and determined to contain less than 50 ppm PCBs.



SITE: Jefferson Processing Site **TDD:** S05-9903-008 **PAN:** 9M0801SIXX **PHOTO:** 37
DIRECTION: Northeast **DATE:** 8/11/99 **PHOTOGRAPHER:** Bowerman
DESCRIPTION: This is an overview of the three transformers located at the outdoor substation area on site.



SITE: Jefferson Processing Site **TDD:** S05-9903-008 **PAN:** 9M0801SIXX **PHOTO:** 38
DIRECTION: Northeast **DATE:** 8/11/99 **PHOTOGRAPHER:** Mayer
DESCRIPTION: Transformer C-657612 located in the outdoor substation area was observed to be marked with a label stating that it was "PCB Contaminated Electrical Equipment."



SITE: Jefferson Processing Site **TDD:** S05-9903-008

PAN: 9M0801SIXX **PHOTO:** 39

DIRECTION: South

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: The bottoms of the cooling pipes to transformer C-657612 were observed to be severely corroded. A stain which appeared to be from oil was observed on the ground surface below the corroded cooling pipes.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

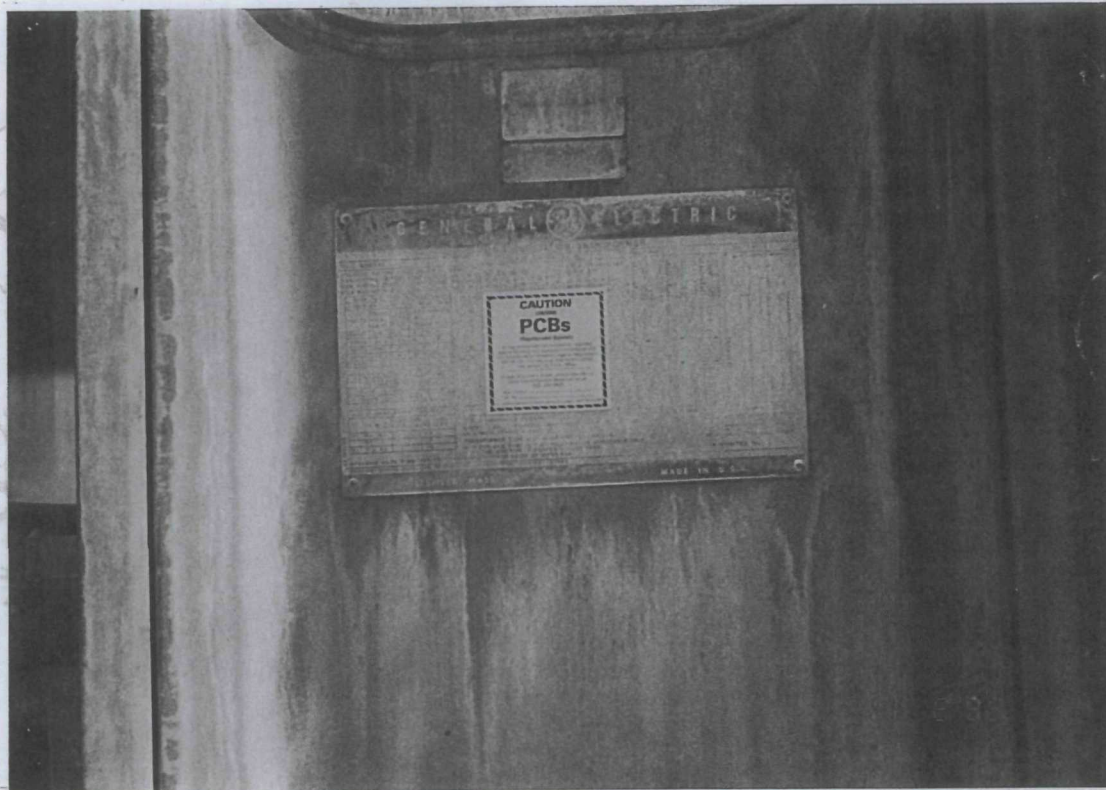
PAN: 9M0801SIXX **PHOTO:** 40

DIRECTION: South

DATE: 8/11/99

PHOTOGRAPHER: Mayer

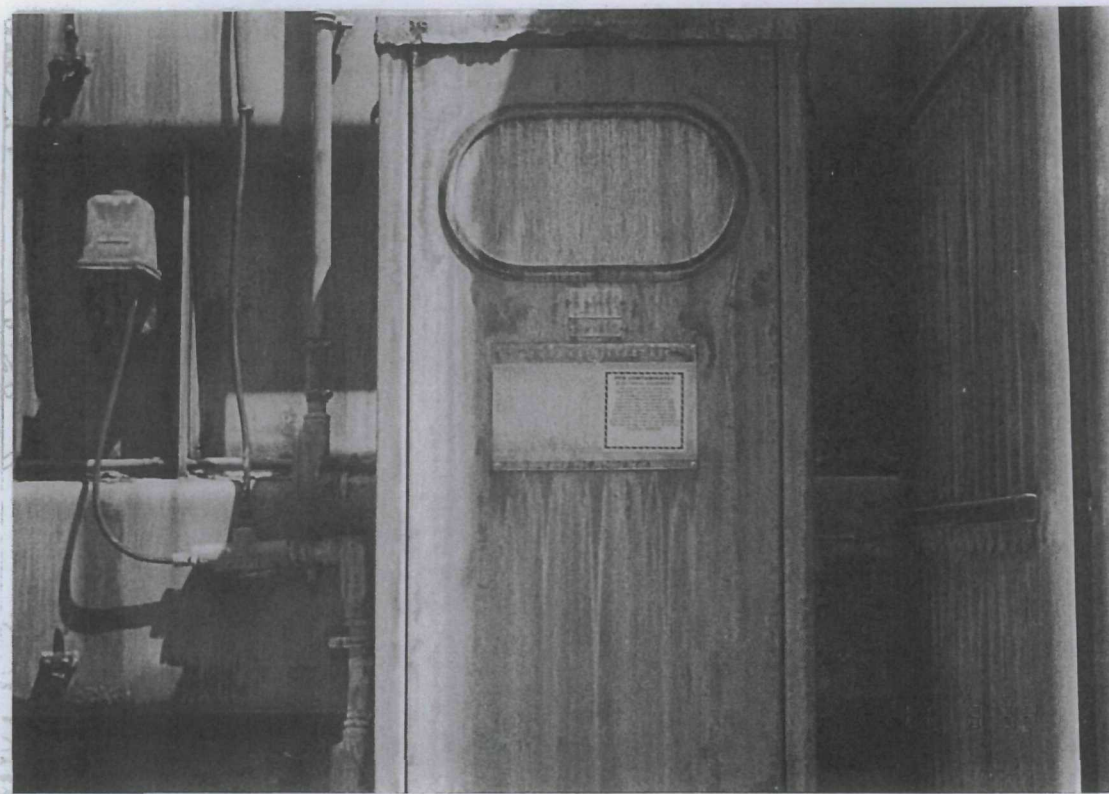
DESCRIPTION: A close-up view of the corroding cooling pipes on transformer C-657612.



SITE: Jefferson Processing Site **TDD:** S05-9903-008
DIRECTION: Northeast **DATE:** 8/11/99

PAN: 9M0801SIXX **PHOTO:** 41
PHOTOGRAPHER: Mayer

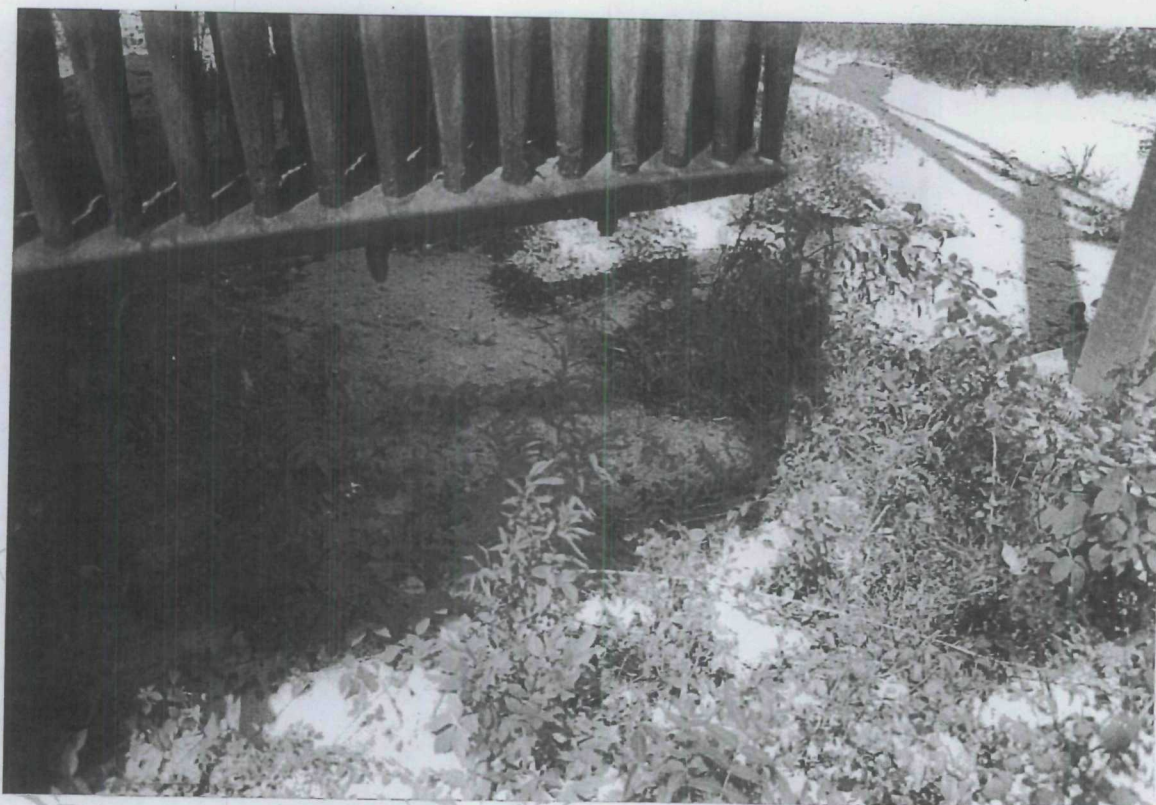
DESCRIPTION: Transformer C-656341 located in the outdoor substation area was observed to be marked with a yellow caution label stating that it contained PCBs.



SITE: Jefferson Processing Site **TDD:** S05-9903-008
DIRECTION: Northeast **DATE:** 8/11/99

PAN: 9M0801SIXX **PHOTO:** 42
PHOTOGRAPHER: Mayer

DESCRIPTION: Transformer C-656340 located in the outdoor substation area was observed to be marked with a label stating that it was "PCB Contaminated Electrical Equipment."



SITE: Jefferson Processing Site

TDD: S05-9903-008

PAN: 9M0801SIXX

PHOTO: 43

DIRECTION: Northwest

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: The cooling pipes to transformer C-656340 were observed to be badly corroded. A wipe sample was collected from the plug located on the far right underside of the cooling pipe base. A black/gray discoloration of the soil below this plug was observed. The discoloration appeared to be an oil stain.



SITE: Jefferson Processing Site

TDD: S05-9903-008

PAN: 9M0801SIXX

PHOTO: 44

DIRECTION: Northwest

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: Oil staining on the sides of transformer C-656340 was observed.



SITE: Jefferson Processing Site **TDD:** S05-9903-008 **PAN:** 9M0801SIXX **PHOTO:** 45
DIRECTION: Southeast **DATE:** 8/11/99 **PHOTOGRAPHER:** Mayer
DESCRIPTION: Oil staining was observed on the sides of transformer C-656340 and on the soil below the transformer.



SITE: Jefferson Processing Site **TDD:** S05-9903-008 **PAN:** 9M0801SIXX **PHOTO:** 46
DIRECTION: Northeast **DATE:** 8/11/99 **PHOTOGRAPHER:** Bowerman
DESCRIPTION: Transformer C-856282 was located in the Pumphouse. A small oil drip stain was observed on the floor below a valve plug. However, the plug did not appear to be leaking currently.



SITE: Jefferson Processing Site

TDD: S05-9903-008

PAN: 9M0801SIXX

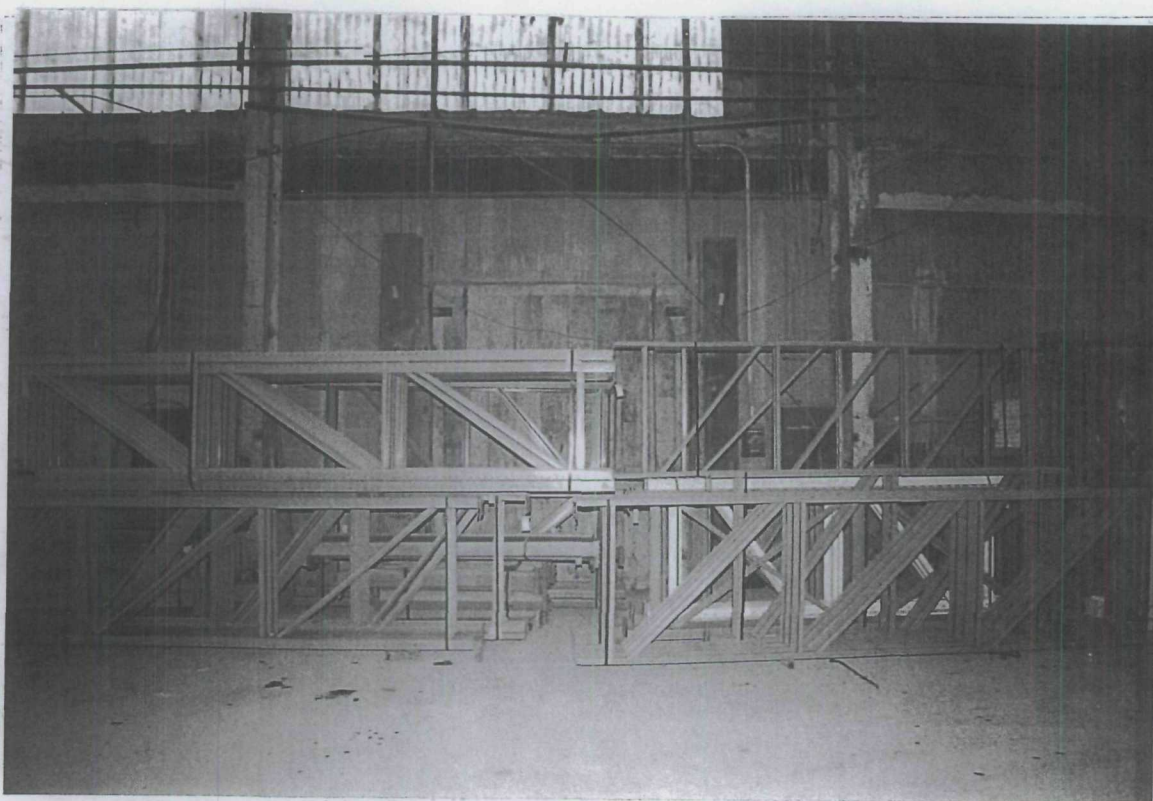
PHOTO: 47

DIRECTION: Northeast

DATE: 8/11/99

PHOTOGRAPHER: Mayer

DESCRIPTION: This is a close-up view of the metal ID plate to transformer C-856282.



SITE: Jefferson Processing Site

TDD: S05-9903-008

PAN: 9M0801SIXX

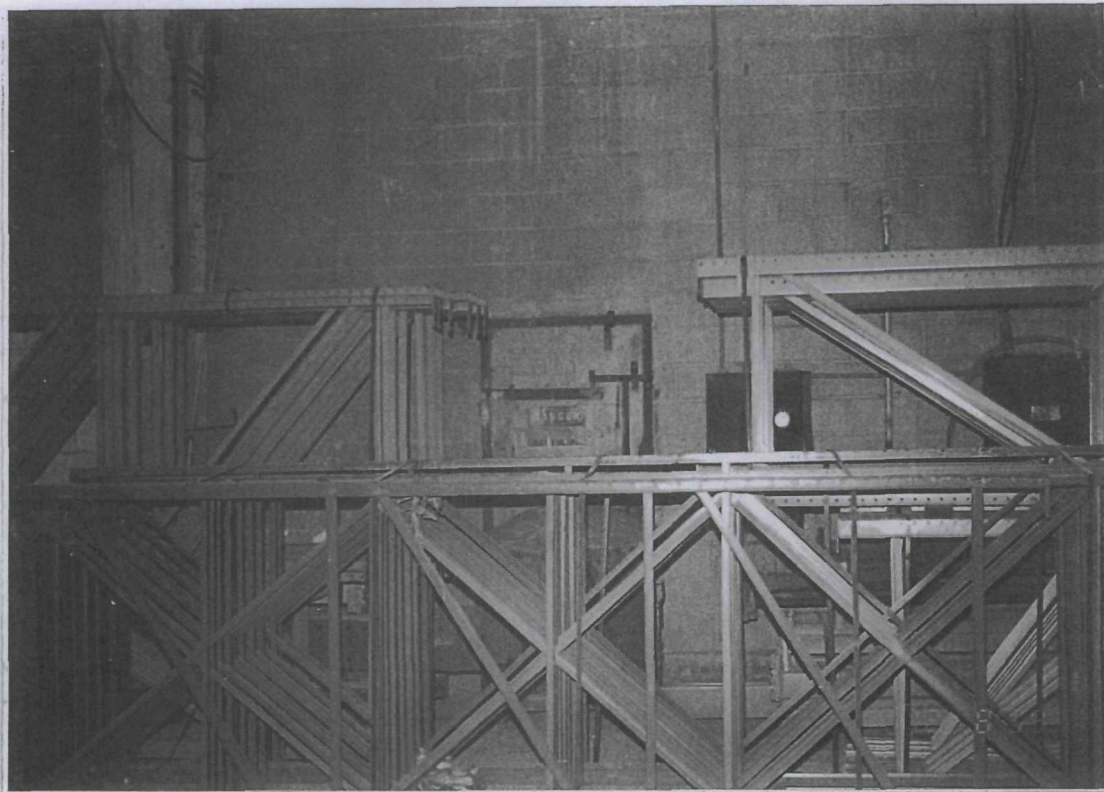
PHOTO: 48

DIRECTION: Northwest

DATE: 8/12/99

PHOTOGRAPHER: Mayer

DESCRIPTION: The main access door into Room 1, Plant J-1, was closed and bundles of metal frames were moved in front of the door to prevent entrance. The door can only be opened with the use of a tow motor due to the weight of the door.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

PAN: 9M0801SIXX **PHOTO:** 49

DIRECTION: Northwest

DATE: 8/12/99

PHOTOGRAPHER: Mayer

DESCRIPTION: A second door into Room 1, Plant J-1, had been previously tack welded closed. A cement block weighing approximately two tons and several bundles of metal frames were placed in front of the door to prevent access the door.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

PAN: 9M0801SIXX **PHOTO:** 50

DIRECTION: Northwest

DATE: 8/12/99

PHOTOGRAPHER: Mayer

DESCRIPTION: The door to Room 2, Plant J-1, was pinned closed by a block of cement which weighed approximately two tons in order to prevent entrance.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

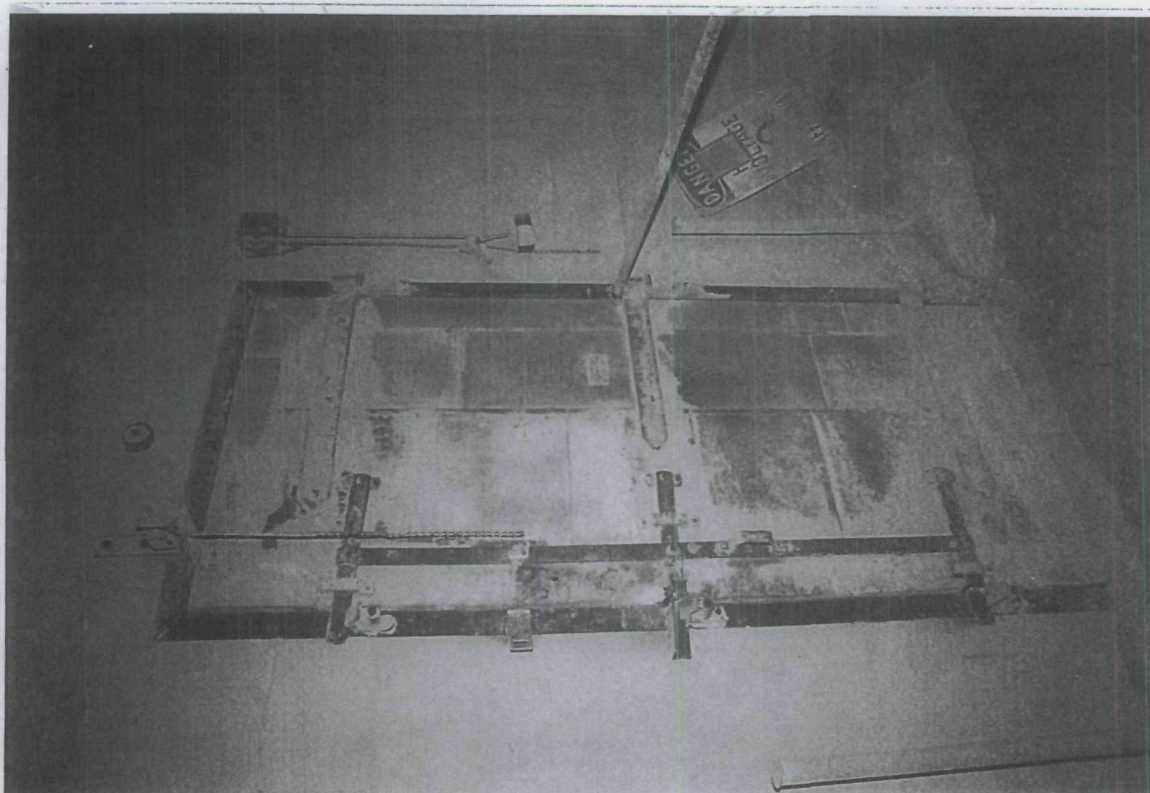
PAN: 9M0801SIXX **PHOTO:** 51

DIRECTION: Southwest

DATE: 8/12/99

PHOTOGRAPHER: Mayer

DESCRIPTION: The first door into Room 5, Plant J-1, appeared to have been tack welded closed to prevent entrance.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

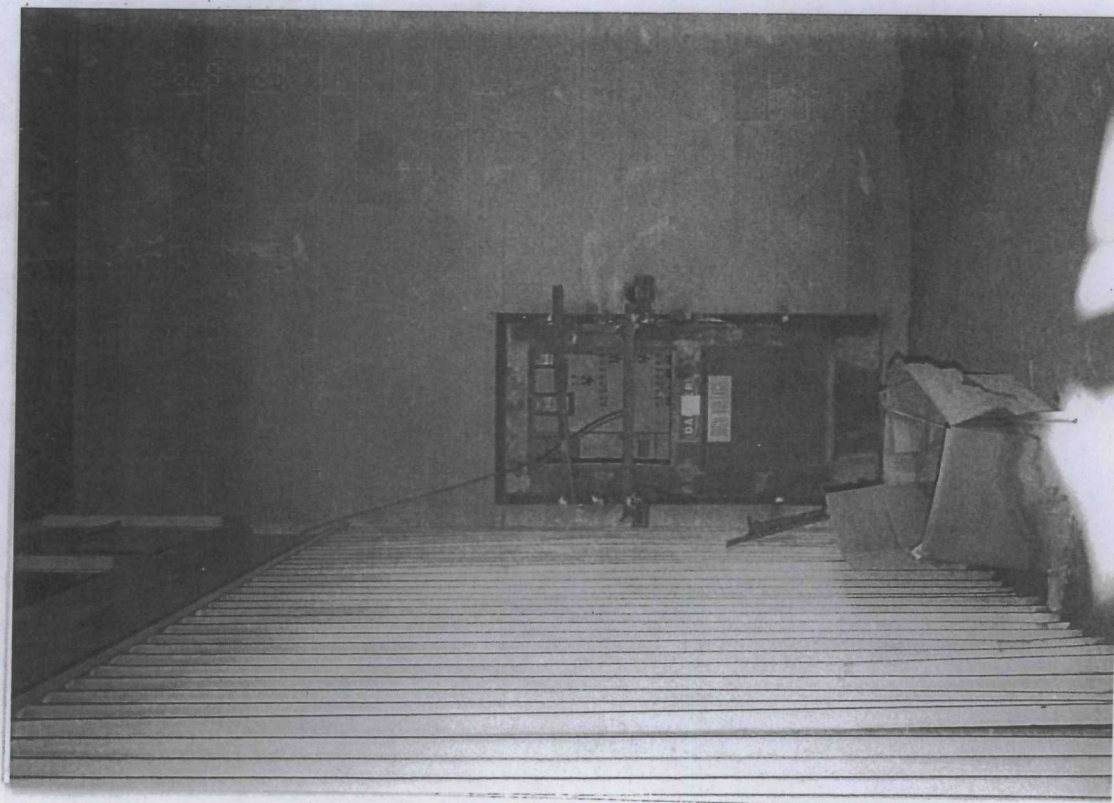
PAN: 9M0801SIXX **PHOTO:** 52

DIRECTION: Southeast

DATE: 8/12/99

PHOTOGRAPHER: Mayer

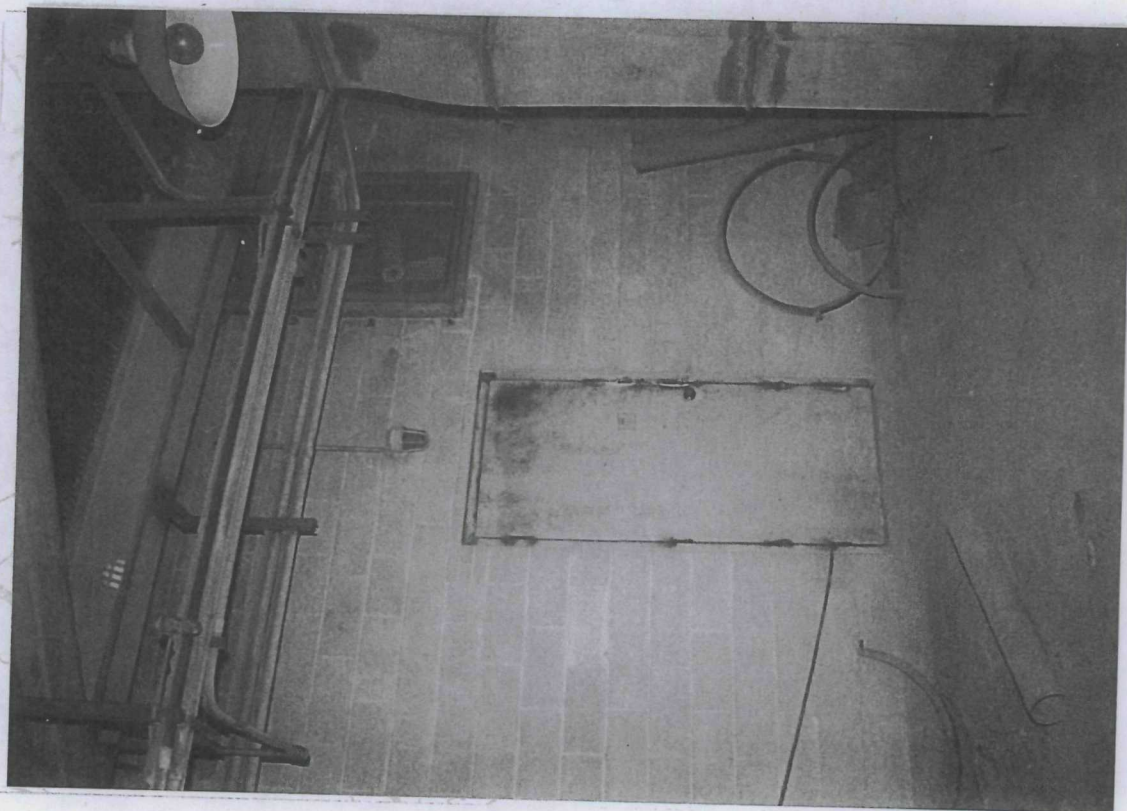
DESCRIPTION: The door to Room 6, Plant J-1 appeared to have been tack welded closed to prevent entrance.



SITE: Jefferson Processing Site **TDD:** S05-9903-008
DIRECTION: Northwest **DATE:** 8/12/99

PAN: 9M0801SIXX **PHOTO:** 53
PHOTOGRAPHER: Mayer

DESCRIPTION: The door to Room 1, Plant J-2, appeared to have been tack welded closed to prevent entrance. Two metal bars had also been welded across the open window in the door.



SITE: Jefferson Processing Site **TDD:** S05-9903-008
DIRECTION: North **DATE:** 8/12/99

PAN: 9M0801SIXX **PHOTO:** 54
PHOTOGRAPHER: Mayer

DESCRIPTION: The door to Room 2, Plant J-2, appeared to have been tack welded closed to prevent entrance.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

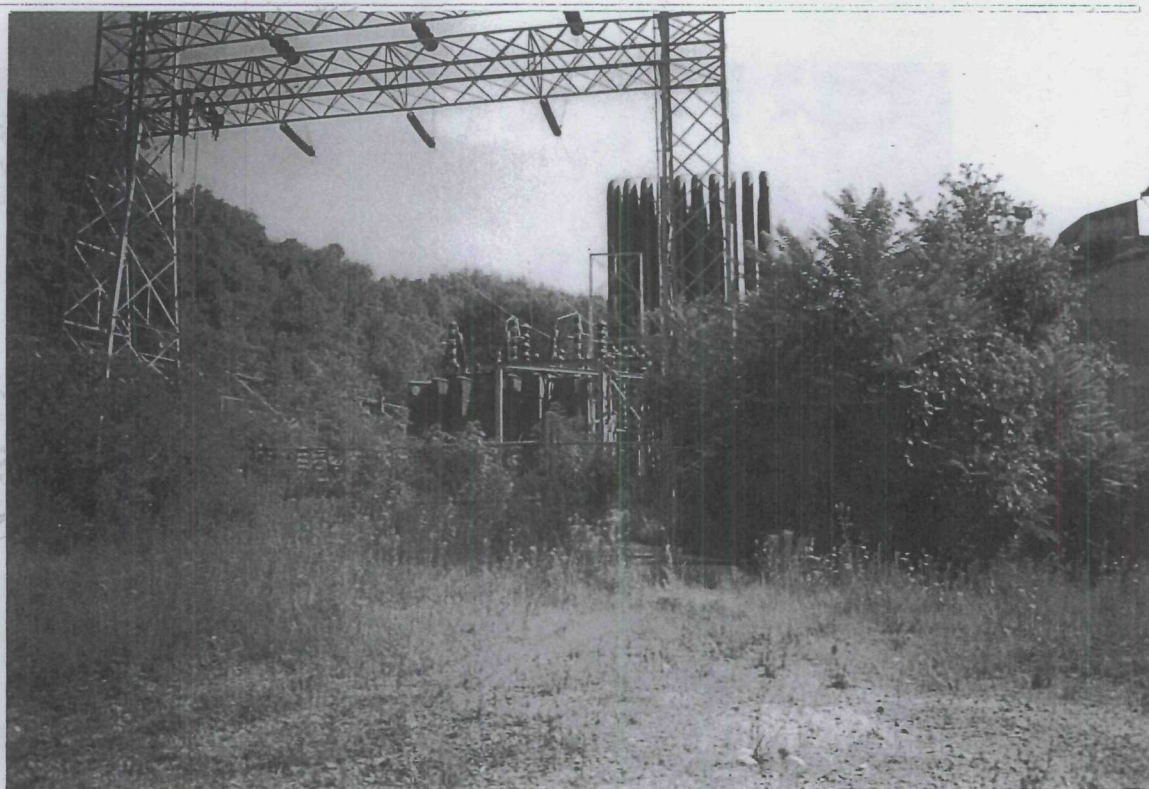
PAN: 9M0801SIXX **PHOTO:** 55

DIRECTION: Southeast

DATE: 8/12/99

PHOTOGRAPHER: Mayer

DESCRIPTION: A large metal cylinder and metal grate had been positioned across the top of the vehicle access path to an unsecured bay door on the northwest side of Plant J-1. Both metal items required heavy equipment to be moved.



SITE: Jefferson Processing Site **TDD:** S05-9903-008

PAN: 9M0801SIXX **PHOTO:** 56

DIRECTION: Northeast

DATE: 8/12/99

PHOTOGRAPHER: Mayer

DESCRIPTION: The gates to the outdoor substation area were closed. However, there was no locking mechanism on the gates to secure them.



SITE: Jefferson Processing Site

TDD: S05-9903-008

PAN: 9M0801SIXX

PHOTO: 57

DIRECTION: West

DATE: 8/12/99

PHOTOGRAPHER: Mayer

DESCRIPTION: The metal overhead bay door on the southeast side of the Pumphouse appeared to be secured. It can only be accessed from the inside by using a pulley to open the door.



SITE: Jefferson Processing Site

TDD: S05-9903-008

PAN: 9M0801SIXX

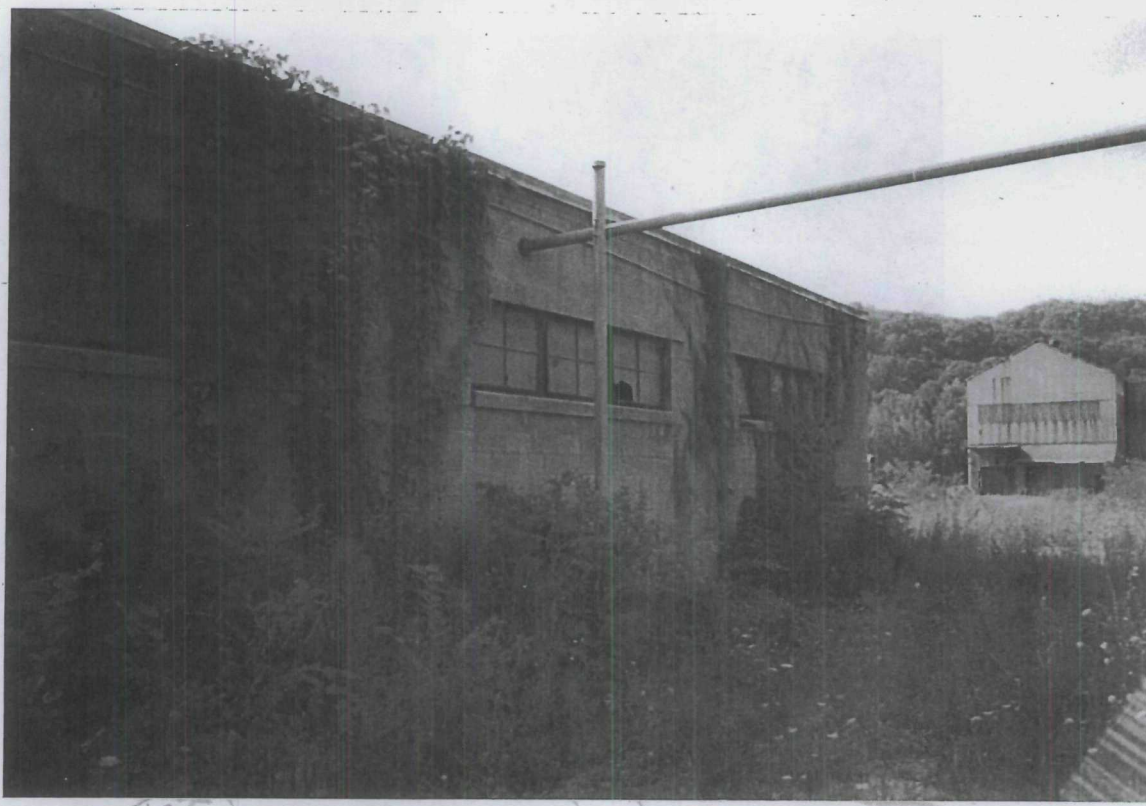
PHOTO: 58

DIRECTION: Northwest

DATE: 8/12/99

PHOTOGRAPHER: Mayer

DESCRIPTION: The pedestrian door on the southeast side of the Pumphouse appeared to have been tack welded closed to prevent entrance to the building.



SITE: Jefferson Processing Site

TDD: S05-9903-008

PAN: 9M0801SIXX

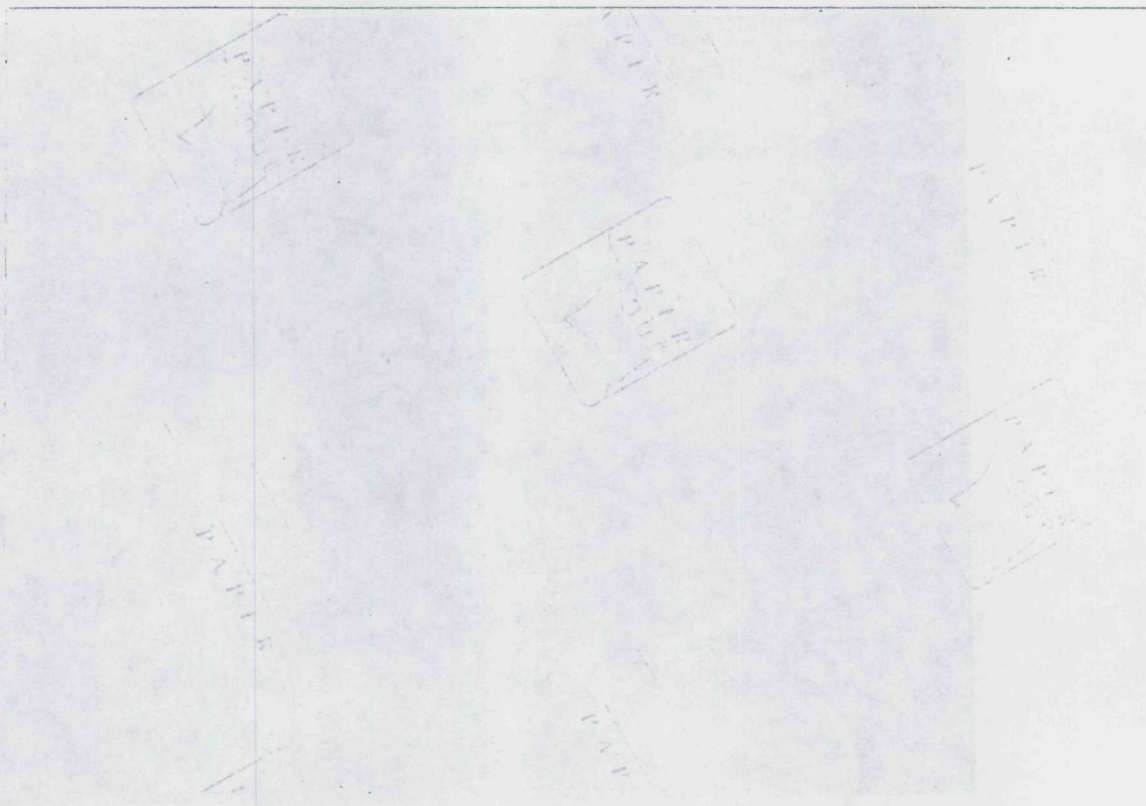
PHOTO: 59

DIRECTION: South

DATE: 8/12/99

PHOTOGRAPHER: Mayer

DESCRIPTION: In order to gain access into this building, an individual, using a ladder, reaches through the broken pane of glass on the northwest side of the Pumphouse, unhooks the lock, opens the window and climbs into the building. From the inside, the metal overhead bay door on the southeast side of the building is opened using the pulley chain. The window appeared to be locked.





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International Specialists in the Environment

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MEMORANDUM

DATE: November 4, 1999

TO: Justin Bowerman, START Project Manager, E & E, Cleveland, Ohio

FROM: Marcia Meredith Galloway, Chief Chemist, E & E, Buffalo, New York

THROUGH: Dave Hendren, START Analytical Services Manager, E & E, Chicago, Illinois

SUBJECT: Organic Data Quality Review for Polychlorinated Biphenyls (PCBs), Jefferson Processing Mingo Junction, Jefferson County, Ohio.

REFERENCE: Project TDD S05-9903-008 Analytical TDD S05-9903-807
Project PAN 9M0801SIXX Analytical PAN 9MAG01TAXX

The data quality assurance (QA) review of one wipe and four soil samples collected from the Jefferson Processing site is complete. The samples were collected on August 11, 1999, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to DLZ Laboratories, Inc., Columbus, Ohio for analyses. The laboratory analyses were performed according to the U.S. EPA Solid Waste 846 Method 8082 for PCBs.

Sample Identification

START Identification No.	Laboratory Identification No.
JP-C-656340 (wipe)	SL22296-1
JP-C-657612	SL22296-2
JP-C-503736	SL22296-3
JP-L-249412	SL22296-4
JP-C-856281	SL22296-5

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on August 11, 1999, extracted on August 16 and 19, 1999, and analyzed on August 21 to 26, 1999. This is within the 14-day holding time limit, from collection to extraction, and 40-day limit from extraction to analysis.

II. Instrument Performance: Acceptable

Appendix B

Data Review Memoranda

The chromatographic resolution was adequate in the standard and sample chromatograms. Surrogate retention times were consistent in the samples and standards.

III. Calibrations:

Initial Calibration: Acceptable

A five-point initial calibration was performed prior to analysis. The percent relative standard deviations (%RSD) of calibration factors in the initial linearity check were less than 20% for detected PCBs as required by Method 8082.

Continuing Calibration: Acceptable (see note)

The percent differences between the calibration standard response factors were less than 15%. In some cases the continuing calibration standard showed a higher percent difference probably due to sample carryover. A check standard run with the calibration standard showed acceptable recovery. No qualification is required, because the samples were bracketed by two acceptable standards.

IV. Blanks: Acceptable

A method blanks were analyzed with the samples. No target compounds were detected in the blanks.

V. Compound Identification: Qualified

The chromatograms and retention times of the detected PCBs in the samples matched those of the standards except for sample JP-C-657612. The PCB pattern for that sample was weathered and did not show a good pattern match. In addition, the matrix spike/matrix spike duplicate (MS/MSD) run on that sample showed poor recovery and inconsistent results. The PCB results for that sample are qualified "J" as estimated.

VI. Additional QC Checks: Qualified

The recoveries of the surrogates used in the samples were within acceptable laboratory control limits for the wipe sample. The surrogate recoveries were low for sample JP-C-657612, but the result is qualified "J" as estimated. The laboratory control sample (LCS) showed acceptable recoveries.

VII. Overall Assessment of Data for Use: Acceptable

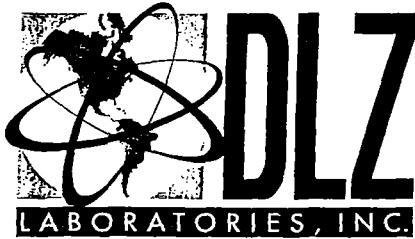
The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office

Jefferson Processing
Project TDD S05-9903-008
Analytical TDD S05-9903-807
PCBs
Page 3

of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 7.0, PCBs. Based upon the information provided, the data are acceptable for use with the above noted qualifications..

Data Qualifiers and Definition

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the required detection limits or quality control criteria were not met.



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INDUSTRIAL HYGIENE

DAVE HENDREN
ECOLOGY AND ENVIRONMENT, INC.
33 NORTH DEARBORN, SUITE 900
CHICAGO, IL 60602

Job Name: KJ5104, SO5-9903-807

Page 3
Lab Number: SL22296-1
Report Date: 08/27/99
Analyzed :08-21-99
Analyzed by:ALB
Method :8082

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE/TIME	RECEIVED
JP-C-656340 OUTDOOR TRANSFORMER AREA	Wipe	CLIENT	11 AUG 99/15:00	13 AUG 99
ANALYTE			RESULT ug/Wipe	*RDL ug/Wipe

Total PCB Compounds:				
PCB-1016			2.0	1.0
PCB-1221			<1.0	1.0
PCB-1232			<1.0	1.0
PCB-1242			<1.0	1.0
PCB-1248			<1.0	1.0
PCB-1254			<1.0	1.0
PCB-1260			34	1.0

* Reporting Detection Limit



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INDUSTRIAL HYGIENE

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33 NORTH DEARBORN, SUITE 900
CHICAGO, IL 60602

Job Name: KJ5104, SO5-9903-807

Page 7
Lab Number: SL22296-2
Report Date: 08/27/99
Analyzed :08-24-99
Analyzed by:ALB
Method :8082

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE/TIME	RECEIVED
JP-C-657612 OUTDOOR TRANSFORMER AREA	Solid	CLIENT	11 AUG 99/15:00	13 AUG 99

ANALYTE	RESULT mg/KgDry	*RDL mg/KgDry

Total PCB Compounds:		
PCB-1016	<0.2	0.2
PCB-1221	<0.2	0.2
PCB-1232	<0.2	0.2
PCB-1242	<0.2	0.2
PCB-1248	<0.2	0.2
PCB-1254	<0.2	0.2
PCB-1260	2.3	0.2

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* Reporting Detection Limit

CM/CA
11/4/99



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INDUSTRIAL HYGIENE

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ECOLOGY AND ENVIRONMENT, INC.
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CHICAGO, IL 60602

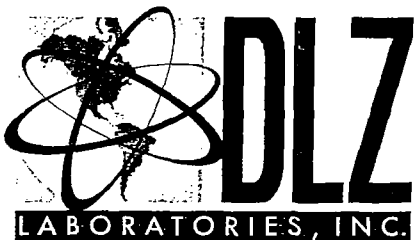
Job Name: KJ5104, S05-9903-807

Page 11
Lab Number: SL22296-3
Report Date: 08/27/99
Analyzed :08-26-99
Analyzed by:RSG
Method :8082

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE/TIME	RECEIVED
JP-C-503736 BUILDING	Solid	CLIENT	11 AUG 99/14:40	13 AUG 99
J-1 1ST FLOOR				

ANALYTE	RESULT mg/KgDry	*RDL mg/KgDry
Total PCB Compounds:		
PCB-1016	<50000	50000
PCB-1221	<50000	50000
PCB-1232	<50000	50000
PCB-1242	<50000	50000
PCB-1248	<50000	50000
PCB-1254	<50000	50000
PCB-1260	278000	50000

* Reporting Detection Limit



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INDUSTRIAL HYGIENE

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CHICAGO, IL 60602

Job Name: KJ5104, SO5-9903-807

Page 15
Lab Number: SL22296-4
Report Date: 08/27/99
Analyzed :08-26-99
Analyzed by:RSG
Method :8082

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE/TIME	RECEIVED
JP-L-249412 BUILDING	Solid	CLIENT	11 AUG 99/14:48	13 AUG 99
J-2 4TH FLOOR				
ANALYTE			RESULT mg/KgDry	*RDL mg/KgDry

Total PCB Compounds:				
PCB-1016			<10	10
PCB-1221			<10	10
PCB-1232			<10	10
PCB-1242			<10	10
PCB-1248			<10	10
PCB-1254			<10	10
PCB-1260			38	10

* Reporting Detection Limit



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INDUSTRIAL HYGIENE

DAVE HENDREN
ECOLOGY AND ENVIRONMENT, INC.
33 NORTH DEARBORN, SUITE 900
CHICAGO, IL 60602

Job Name: KJ5104, S05-9903-807

Page 19

Lab Number: SL22296-5

Report Date: 08/27/99

Analyzed :08-26-99

Analyzed by:RSG

Method :8082

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE/TIME	RECEIVED
=====	=====	=====	=====	=====
JP-C-856281 BUILDING	Solid	CLIENT	11 AUG 99/14:50	13 AUG 99
J-2 4TH FLOOR				
=====	=====	=====	=====	=====
ANALYTE			RESULT	*RDL
			mg/KgDry	mg/KgDry

Total PCB Compounds:				
PCB-1016			<50000	50000
PCB-1221			<50000	50000
PCB-1232			<50000	50000
PCB-1242			<50000	50000
PCB-1248			<50000	50000
PCB-1254			<50000	50000
PCB-1260			212000	50000

* Reporting Detection Limit

Detection limits were raised in sample SL22296-2 for PCB compounds due to matrix interferences.

DO = Surrogates were diluted out in samples SL22296-3, 4 and 5 due to the high level of dilution required for the sample.

Detection limits were raised in samples SL22296-3, 4 and 5 for PCB compounds due to elevated target compound levels.